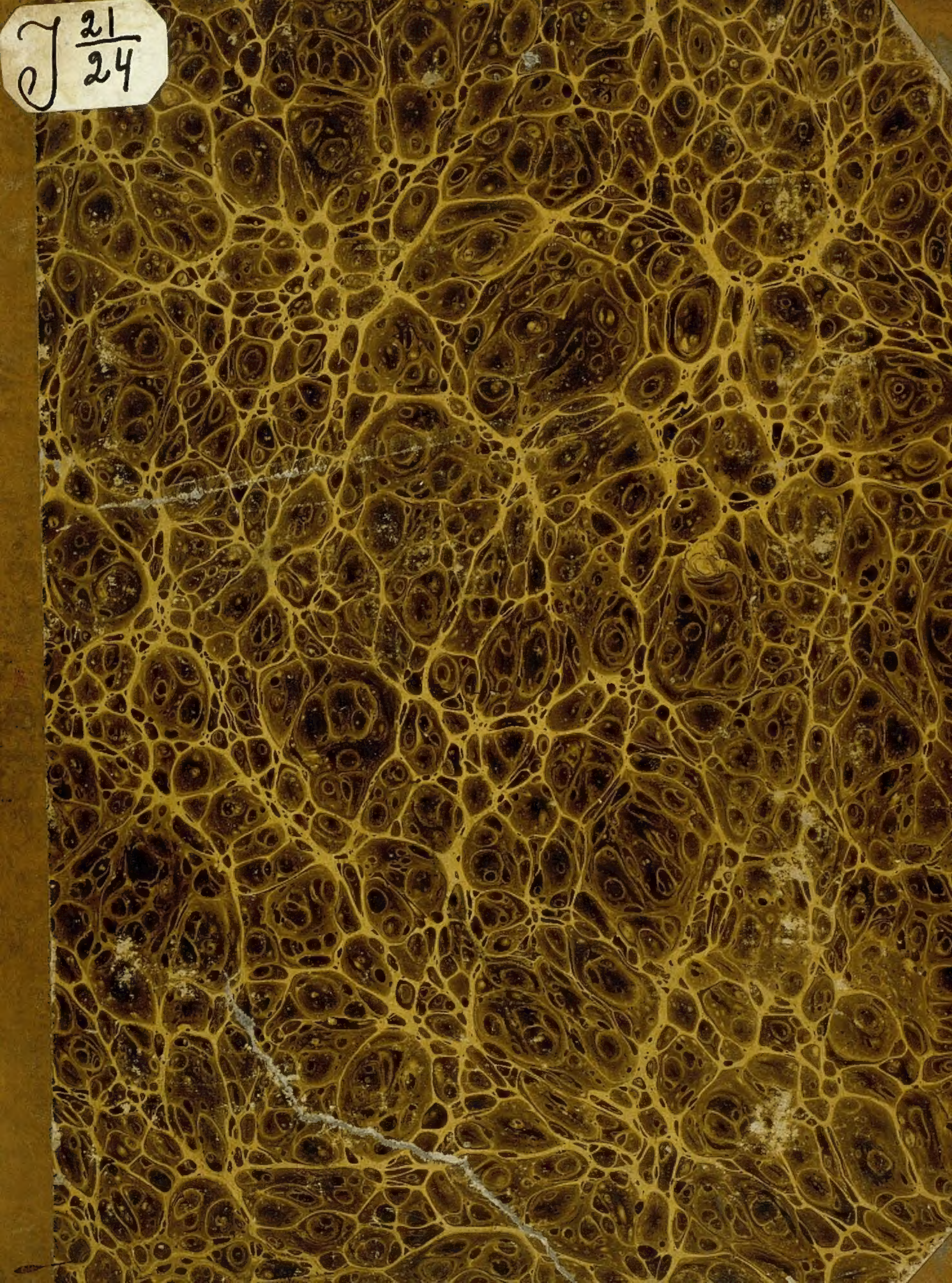


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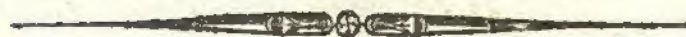
ВСПОМОГАТЕЛЬНЫЯ ТАБЛИЦЫ,

Собранныя Корпуса Флотскихъ Штурмановъ Подполковникомъ

Барономъ Врангелемъ,

и

изданныя Гидрографическимъ Депо Главнаго Морскаго Штаба
Его Императорскаго Величества.



САНКТПЕТЕРБУРГЪ,

Въ Морской Типографіи

1835 года.

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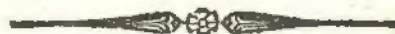


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О Г Л А В Л Е Н І Е.

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ИЗЪЯСНЕНІЕ ТАБЛИЦЪ.

ТАБЛИЦА I и II.

Для превращенія градусовъ во время и обратно.

ПРИМѢРЪ 1й.

243°. 19'. 57", 5 обратить во время.

Въ таблицахъ мы находимъ для 240°. 0'. 0" = 16^ч. 0^м. 0^с.

— 5. 0. 0. = .. 12. 0.

19. 0. = .. 1. 16.

37,5 = 2,5.

243. 19. 37,5 = 16. 13. 18,5.

ПРИМѢРЪ 2й.

16^ч. 13^м. 18^с, 5 обратить въ градусы.

Въ Табл. II. мы находимъ для 16^ч. 0^м. 0^с. = 240°. 0' 0".

— .. 13. 0. = 3. 15. 0.

.. .. 18. = .. 4. 30.

.. .. 0,5. = 7,5.

16. 13. 18,5 = 243. 19. 37,5.

ТАБЛИЦА III.

Включаетъ въ себя Таблицу Буркарда, для приведенія звѣзднаго времени въ среднее солнечное время и обратно.—На поляхъ сей таблицы помѣщена на всѣхъ не щепныхъ страницахъ: табличка для нахождения солнечныхъ долей секунды, и на всѣхъ щепныхъ страницахъ числа, которыя употребляютъ при приведеніи средняго времени въ звѣздное, какъ изъ примѣровъ видно:

ПРИМѢРЪ 3й.

21^ч. 19^м. 54^с, 13 звѣзд. вр: обратить въ среднее солнечн. время.

На спир: 9 показано упрежденіе для 21^ч. 19^м. 24^с. = 3^м. 29^с, 6.

изъ боков: табл. на спир: 9 для остальныхъ 29. 0, 08.

Упрежденіе для 21. 19. 53. = 3. 29, 68.

Которое вычисляю изъ 21^ч. 19^м. 54^с, 13 даю изъ 21^ч. 16^м. 24^с, 45 истинн. среднее время.

ПРИМѢРЪ 4й.

21^ч. 16^м. 24^с, 45 средн. вр: обратить въ звѣздное время.

На спир: 9 показано упрежденіе для 21^ч. 16^м. 21^с. = 3' 29", 1.

для остальныхъ 4. 0, 01.

3. 29, 11. Сіе количество

должно исправить боковыми табличками — и такъ находимъ на спир: 8 для 3'. 3" поир: 0", 5 (*) и для остальныхъ 26" на спир. 9, 0, 07 которое всегда складывается, и такъ будетъ искомое звѣзд. время 21^ч. 16^м. 24^с, 45 + 3^м. 29^с, 11 + 0', 57 = 21^ч. 19^м. 54^с, 13

(*) Здѣсь какъ и на спир: 10 въ боковыхъ табличкахъ поправка должна быть десятии доли, а не сотыми.

ТАБЛИЦЫ IV. V и VI.

Для сисканія поправки Полдня и Полуночи, опредѣленнаго помощію соопвѣствующихъ высотъ солнца.—Соснавлен: Г. Спруве.

Понеже солнце перемѣняетъ свое склоненіе, но при соопвѣствующихъ высотахъ часовые углы не будутъ равны, когда солнце въ томъ же Алмикантарѣ до и по полудни.—Слѣдовательно полусумма обѣихъ временъ не дастъ *Истиннаго полдня*, но произведетъ такъ называемый *Непоправленный полдень*, и разность между симъ и истиннымъ Полднемъ называется *поправка полдня*.—

Явно, что величина сей поправки зависить отъ двухъ причинъ: 1-е отъ продолжительности времени между обѣими высотами, 2-е отъ скорости перемѣны склоненія и въ которую сторону; почему и помѣщена сія поправка въ 2-хъ таблицахъ: въ 1-й, Аргументъ половины промежутка времени, во 2-й, Аргументъ мѣсяцъ и числа, ибо склоненіе солнца зависить отъ оной, но какъ солнце не въ одинъ и тотъ же моментъ каждаго года вступаетъ въ равноденственную точку γ , то въ таблицѣ VI дана поправка числа до 1850 года.

Назвавъ поправку Полдня M и поправка Полуночи M' , широта ϕ , то будетъ:

$$M = A\alpha \cdot \tan \phi + Bb.$$

$$M' = -A\alpha \cdot \tan \phi + Bb.$$

A и B , берутся изъ табл: IV съ Аргументомъ половины промежутка времени— оно должно быть выражено въ истинное солнц: время, ежели наблюденія были учинены по хронометру шедшему по звѣздному времени и промежутокъ между высотами до и по полудни великъ, то ошибка значительна. —

a и b берутся изъ Табл: V съ Аргументомъ: поправленное число $d' = d + k + l$, гдѣ d число, k изъ Табл: VI Аргум: года (2) и l западная долгота отъ Парижа въ часахъ окружности выражено = западная долгота отъ Гринвича + 0,007.

Такимъ образомъ найдется поправка Полдня или Полуночи выражено въ истинное солнечное время, которое и должно быть превращено въ время часовъ— ежели широта южная, то $\tan \phi$ отрицательный.

ПРИМѢРЪ 5й.

Было наблюдаемо въ Tobolskъ 5 Юня 1832 года по хронометру шедшему по звѣздному времени, полдень по соопвѣствующимъ высотамъ, коихъ половина промежутка времени $h = 3^h. 48^m. 20^s$. суточный уходъ хронометра 10^s . $\phi = 58^\circ. 11'. 7''$. Долгота $65^\circ. 46'$ восточная отъ Парижа; почему $l = \frac{3946}{21600} = -0,183$.

$$d = 5^{\text{го}} \text{ Юня}$$

$$k + 0,547 \text{ Табл. VI.}$$

$$l = -0,183.$$

$$d' = +5,364. \text{ Юня}$$

$$h = 3^h. 48^m. 20^s. \text{ вр: } \text{хр.} = 3^h. 47^m. 54^s. \text{ истинн: солн.-вр.}$$

$$\text{Log } A = 7,7987 \dots \text{Log } B = 7,5356. \text{ Табл. IV стран. 11}$$

$$\text{Log } a = 2,8975 n$$

$$\text{Log } b = 2,5162. \text{ Табл. V стран. 13}$$

$$\text{Log } \tan \phi = 0,9075.$$

$$\text{Log } \Pi = 0,0518$$

$$\text{Log } I = 0,9037 n$$

(2) Ежели годъ високосный и число въ Генварѣ или Февралѣ, то берется изъ таблицы лѣвое число.

$$I = -8,01$$

$$II = +1,13$$

$$M = -6,88 \text{ истин. солн. вр.} = -6'',90 \text{ хр. вр.}$$

П Р И М Ъ Р Ъ 6й.

19 Марта 1832 года ссыскивается поправка полуночи въ Тобольскѣ для того же хронометра, при половинѣ промежутка времени между высотами 10° . 15° . 30° . —

$$d' = 19,364 \text{ Марта } 10^\circ. 15^\circ. 30^\circ. \text{ хр. вр.} = 10^\circ. 15^\circ. 53^\circ. \text{ истин. солн. вр.}$$

$$\text{Log } A = 8,5027 \quad \text{Log } B = 8,4544 n$$

$$\text{Log } a = 3,4539 n \quad \text{Log } b = 1,371 n$$

$$\text{Log tang } \phi = 0,2075 \quad \text{Log } II = 9,825$$

$$\text{Log } I = 2,1641 n$$

$$- I = +145,90$$

$$+ II = + 0,66$$

$$M' = +146,56 \text{ истин. вр.} = 146'',95 \text{ хрон. вр.}$$

Примѣч. Если въ семь случаевъ прямо для 10° . 15° . 30° . сысканы были бы поправки.

$$\text{Log } A = 8,5100 \quad \text{Log } B = 8,4632$$

$$\text{Log } I = 2,1744 n \quad \text{Log } II = 9,834.$$

$$- I = +148,44$$

$$+ II = + 0,66.$$

$$M' = +149,10. \text{ и такъ } 2'',54 \text{ больше наслоящаго}$$

въ предыдущемъ примѣрѣ ошибка не произошла бы отъ тойже причины.

ТАБЛИЦА VII.

Экваторіальный паралаксъ солнца.

Взяты изъ наблюдений Г. Энке.

ТАБЛИЦА VIII.

Для приведенія наблюдаемой высоты свѣтила въ Меридіональную тогда, когда оно не болѣе 36 минутъ отстоитъ отъ Меридіана.

Для опредѣленія широты, одинъ изъ лучшихъ способовъ есть тотъ, что въ взять нѣсколько высотъ свѣтила около меридіана, и приведя ихъ въ Меридіональную получимся столько опредѣленныхъ широтъ, сколько высотъ взято было. Приведеніе сіе можно сдѣлать различнымъ образомъ, рассмотримъ тотъ способъ къ которому вычислена Таблица VIII.

Да будетъ H высота Меридіон., h въ Меридіана, δ склоненіе, ϕ широта и t часовой уголъ, высота отъ Южнаго Горизонта и δ сѣверное положительное, то

$$\sin h = \sin \phi. \sin \delta + \cos \phi. \cos \delta. \cos t.$$

$$= \sin \phi. \sin \delta + \cos \phi. \cos \delta. - 2 \cos \phi. \cos \delta \sin \frac{1}{2} t^2.$$

$$= \cos (\phi - \delta) - 2 \cos \phi. \cos \delta. \sin \frac{1}{2} t^2.$$

$$\text{но } (\phi - \delta) = 90^\circ - H, \text{ почему } \cos (\phi - \delta) = \sin H \text{ и}$$

$$\sin h = \sin H - 2 \cos \phi. \cos \delta. \sin \frac{1}{2} t^2.$$

$$\sin H - \sin h = 2 \cos \phi. \cos \delta. \sin \frac{1}{2} t^2.$$

$$2 \cos \frac{1}{2} (H+h). \sin \frac{1}{2} (H-h) = 2 \sin \frac{1}{2} (H-h) \cos (H-\frac{1}{2} (H-h)) \text{ и}$$

назвавъ $(H-h) = x$, то будетъ

$$2 \sin \frac{1}{2} x. \cos \frac{1}{2} x. \sin (\phi - \delta) + 2 \sin \frac{1}{2} x^2. \cos (\phi - \delta) = 2 \sin \frac{1}{2} t^2. \cos \phi. \cos \delta.$$

$$\sin \frac{1}{2} x. \cos \frac{1}{2} x. + \sin \frac{1}{2} x^2. \cotang (\phi - \delta) = \sin \frac{1}{2} t^2. \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)}$$

но какъ x величина малая, то можно принять $\cos \frac{1}{2} x = 1$. Слѣдоват.

$$\sin \frac{1}{2} x + \sin \frac{1}{2} x^2. \cotang (\phi - \delta) = \sin \frac{1}{2} t^2. \frac{\cos \phi \cos \delta}{\sin (\phi - \delta)}$$

$$\sin \frac{1}{2} x = \sin \frac{1}{2} t^2. \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} - \sin \frac{1}{2} x^2. \cotang (\phi - \delta)$$

$$\sin \frac{1}{2} x^2. \cotang (\phi - \delta) = \sin \frac{1}{2} t^2 \left(\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} \right)^2 \cotang (\phi - \delta) - 2 \sin \frac{1}{2} t^2. \sin \frac{1}{2} x^2 \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)}.$$

$$\cotang (\phi - \delta)^2 + \dots$$

$$\sin \frac{1}{2} x = \sin \frac{1}{2} t^2 \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} - \sin \frac{1}{2} t^4. \left(\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} \right)^2 \cotang (\phi - \delta) + 2 \sin \frac{1}{2} t^2. \sin \frac{1}{2} x^2 \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)}.$$

$$\cotang (\phi - \delta)^2 - \dots$$

$$x = \frac{2 \sin \frac{1}{2} t^2}{\sin 1''} \cdot \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} - \frac{2 \sin \frac{1}{2} t^4}{\sin 1''} \cdot \left(\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} \right)^2 \cotang (\phi - \delta)$$

$$\text{I. } H=h + \frac{2 \sin \frac{1}{2} t^2}{\sin 1''} \cdot \frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} - \frac{2 \sin \frac{1}{2} t^4}{\sin 1''} \cdot \left(\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} \right)^2 \cotang (\phi - \delta)$$

$$\text{II. Высота и Склоненіе Южное } H=h + \frac{2 \sin \frac{1}{2} t^2}{\sin 1''} \cdot \frac{\cos \phi. \cos \delta}{\sin (\phi + \delta)} - \frac{2 \sin \frac{1}{2} t^4}{\sin 1''} \cdot \left(\frac{\cos \phi. \cos \delta}{\sin (\phi + \delta)} \right)^2 \cotang (\phi - \delta)$$

$$\text{III. Высота Сѣверн. выше пол. } H=h + \frac{2 \sin \frac{1}{2} t^2}{\sin 1''} \cdot \frac{\cos \phi. \cos \delta}{\sin (\delta - \phi)} - \frac{2 \sin \frac{1}{2} t^4}{\sin 1''} \cdot \left(\frac{\cos \phi. \cos \delta}{\sin (\delta - \phi)} \right)^2 \cotang (\delta - \phi)$$

$$\text{IV. Высота Сѣверн. ниже пол. } H=h - \frac{2 \sin \frac{1}{2} t^2}{\sin 1''} \cdot \frac{\cos \phi. \cos \delta}{\sin (\phi + \delta)} + \frac{2 \sin \frac{1}{2} t^4}{\sin 1''} \cdot \left(\frac{\cos \phi. \cos \delta}{\sin (\phi + \delta)} \right)^2 \cotang (\phi + \delta).$$

Въ Таблицѣ VIII вычислено подъ лицевою m членъ $\frac{2 \sin \frac{1}{2} t^2}{\sin 1''}$ и подъ лицевою n членъ

$\frac{2 \sin \frac{1}{2} t^4}{\sin 1''}$ для каждой секунды до 36 минутъ.

Если около Кульминаціи взято нѣсколько высотъ, то для всѣхъ ихъ $\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)}$ и $\cotang (\phi - \delta)$ постоянны. — Слѣдовательно надлежитъ только сыскать часовые углы для всѣхъ наблюдений, и изъ Таблицъ соотвѣствующихъ m и n , взявъ сумму всѣхъ m и n — умножить первую на $\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)}$ а вторую часъ. т. е. сумму всѣхъ n на $\left(\frac{\cos \phi. \cos \delta}{\sin (\phi - \delta)} \right)^2 \cotang (\phi - \delta)$, сумму сихъ произведений раздѣлить на число наблюдений, частное и будетъ поправка, которую надлежитъ придать съ соотвѣственнымъ знакомъ къ Арифметической среднѣ между всеми высотами — и получимъ Меридіональную высоту.

Если склоненіе южное, то $\sin \delta$ будетъ отрицательный, а если высота отъ Сѣвернаго горизонта и свѣтила выше Полюса, то $H = 90^\circ + \phi - \delta$; а ниже Полюса $H = \phi - \delta - 90^\circ$ — т. е. вмѣсто δ будетъ $180 - \delta$.

ПРИМѢРЪ 7-й.

У Гапгеудскаго маяка $\frac{1}{13}$ Августа 1834 года взяны 12 высотъ \odot около полудня, а именно:

Вычисленіе посполныхъ.	Вычислен: Рефракц:	Выс: \odot исправлен: часовые углы соотвѣстс. погрѣшн: испр:		
		t.	m.	n.
		1. 45°. 15'. 10". 0ч.	10м. 42с.	224,8. 0,12.
Log. Cos ϕ = 9,70202.	$b=339,7; f=+18,7.$	2. 15. 40.	9. 36.	180,9. 0,08.
Log. Cos δ = 9,98558.	$\tau'=+18,9.$	3. 16. 20.	8. 4.	127,8. 0,04.
— Log. Sin $(\phi-\delta)$ = 9,84936.	Log Tang ζ = 0,00424.	4. 16. 50.	6. 13.	75,9. 0,01.
Log. $\left(\frac{\text{Cos } \phi. \text{Cos } \delta}{\text{Sin } (\phi-\delta)}\right)$ = 9,83804 = Log c	$\alpha = 1,75914.$	5. 17. 25.	4. 2.	31,9. 0,00.
	$\beta = + 899.$	6. 17. 40.	2. 16.	10,1. 0,00.
	$rY = - 2174.$	7. 17. 45.	0. 48.	1,3. 0,00.
Log. $\left(\frac{\text{Cos } \phi. \text{Cos } \delta}{\text{Sin } (\phi-\delta)}\right)^2$ = 9,67603 = Log c ² .	$-\frac{70}{8} \tau' = - 165.$	8. 17. 45.	2. 26.	11,6. 0,00.
	1,74898.	9. 17. 20.	4. 18.	36,3. 0,00.
	Рефракц. = 56,"10.	10. 17. 10.	5. 28.	58,7. 0,01.
		11. 16. 25.	7. 48.	119,5. 0,04.
		12. 15. 50.	9. 12.	166,2. 0,07.
Вычислен. парал.	$h'=45. 16. 46,7.$	Сум. m. = 1045,0. Сум. n. = 0,37.		
	$cm = + 59,97.$	Log. 5,01912. Log = 9,5682.		
0,9279 изъ Табл. VII.	$c^n \text{ Cotg } (\phi-\delta) =$	0,01. Log c 9,83804. Log c ² = 9,6761.		
Log Cos h 9,8474	$H' = 45. 17. 46,66.$	2. 85716. Log Cotg $(\phi-\delta)$		
0,7753.	Полдіаметръ — 15 48,9.	0,0003.		
Параллаксъ 5,"96.	Рефракц. — 56,10.	12) 719",7. 9,2446.		
	Параллаксъ + 5,96.	cm = 59,97. 12) 0,17.		
	$H = 45. 1. 7,6.$	$c^n \text{ cotg } (\phi-\delta) = 0,01.$		
	$\delta = 14. 47. 7,2.$			
	50. 14. 0,4.			
	Широта 59°. 45'. 59",6.			

ТАБЛИЦА IX.

Log. Sin $\frac{1}{2}t^2$.

Полярная звѣзда, находясь близъ Полюса имѣя весьма медленное движеніе, очень способна для опредѣленія широты, она же и сколько свѣтла, чѣмъ чрезъ трубу преодолѣна или повторительнаго круга, почти во всякое время ее найди и наблюдать можно.

Формула, по которой въ предыдущемъ примѣрѣ вычисляли, достаточно при наблюденіяхъ близкихъ къ меридіану; но въ противномъ случаѣ подлежало бы вычислять болѣе.

двухъ членовъ, чѣмъ затрудняло бы вычисленіе; но формула $x = \frac{2 \text{ Cos } \phi. \text{Cos } \delta}{\text{Sin } \frac{1}{2}(Z+\zeta) \text{Sin } 1''} \text{Sin } \frac{1}{2}t^2$

VIII.

можетъ быть всегда употребляема. Z значить Меридіональное разстояніе отъ зенита, а ζ разстояніе отъ зенита вѣ Меридіана. Искомое ζ хотя входитъ въ формулу, но перебуется ее знать только на минуту.

Таблица IX содержитъ въ себѣ $\text{Log} \sin \frac{1}{2}t^2$ на каждую секунду, отъ 30' данный $\text{Log} \sin \frac{1}{2}t^2$ въ 6 мѣстахъ по вычисленіе достаточно Логарифмами 5-ю десятичными знаками, и почему послѣдняя цифра отдѣлена точкою, отъ 1". показано подъ минутами разность для 1".

Доказательство формулы $x = \frac{2 \cos \phi \cdot \cos \delta}{\sin \frac{1}{2}(Z+\zeta) \sin 1''} \cdot \sin \frac{1}{2}t^2$.

$$\cos Z = \sin \phi \cdot \sin \delta + \cos \phi \cdot \cos \delta.$$

$$\cos \zeta = \sin \phi \cdot \sin \delta + \cos \phi \cdot \cos \delta \cdot \cos t.$$

$$\cos Z - \cos \zeta = (1 - \cos t) \cdot \cos \phi \cdot \cos \delta.$$

$$2 \sin \frac{1}{2}(Z+\zeta) \sin \frac{1}{2}(\zeta-Z) = 2 \cos \phi \cdot \cos \delta \cdot \sin \frac{1}{2}t^2.$$

$$\sin \frac{1}{2}(\zeta-Z) = \frac{\cos \phi \cdot \cos \delta}{\sin \frac{1}{2}(Z+\zeta)} \cdot \sin \frac{1}{2}t^2 = \frac{1}{2}(\zeta-Z) \sin 1''.$$

$$(\zeta-Z) = x = \frac{2 \cos \phi \cdot \cos \delta}{\sin \frac{1}{2}(Z+\zeta) \sin 1''} \cdot \sin \frac{1}{2}t^2. \text{ и назвавъ } \frac{2 \cos \phi \cdot \cos \delta}{\sin 1''} = c \text{ то}$$

$$x = \frac{\sin \frac{1}{2}t^2 \cdot c}{\sin \frac{1}{2}(Z+\zeta)}.$$

Для кульминаціи ∇ ниже Полюса $\delta = 180^\circ - \delta$.

П Р И М Ъ Р Ъ 8-й.

Гаггеудекій маякъ $\frac{1}{15}$ Августа 1834 года было наблюдаемо разстояніе отъ зенита полярной ∇ выше Полюса универсальнымъ инструментомъ, а именно.

Часовые углы. 0 ^ч . 45 ^м . 53 ^с . 0. 0 ^ч . 47 ^м . 47 ^с . 2. 0 ^ч . 58 ^м . 57 ^с . 1 1 ^ч . 1 ^м . 46 ^с . 6				
Вычисл: c	$\text{Log} \sin \frac{1}{2}t^2 =$	7, 95424.	8, 03461.	8, 21617.
	$\text{Log} c$	3, 75764.	3, 75764.	3, 75764.
$\text{Log} \cos \phi = 9,70202.$	$-\text{Log} \sin \frac{1}{2}(Z+\zeta)$	9, 68101.	9, 68107.	9, 68119.
$\text{Log} \cos \delta = 8,44016.$	$\text{Log} x =$	2, 03087.	2, 11118.	2, 29262.
$\text{Log} 2 = 0,30105.$	$x =$	107", 37.	129", 18.	196", 16.
$-\text{Log} \sin 1'' = 4,68557.$		1.47, 57.	2. 9, 18.	3.16, 16.
$\text{Log} c = 3,75764.$	Опш. на Кр. 1.	19. 24, 25.	1. 19. 4, 0.	58. 41. 57, 15.
		1. 21. 11, 62.	1. 21. 13, 18.	58. 58. 40, 99.
		21. 13, 18.		58. 38. 42, 23.
				58. 42, 23.

$$b = 359,35, f = +12, 2, \tau' = 12, 5. \text{ Ср. 1. 21. 12, 40.}$$

$$\text{Ср. 58 58. 41, 61.}$$

$$1. 21. 12, 40.$$

$$57. 17. 29, 21.$$

Наблюд: Мери разстоян: отъ зенита: 28. 38. 44, 6.

Рефракц: + 31, 29.

$$28. 39. 15, 89.$$

Склон: Полярн: $\nabla = 88. 25. 16, 29.$

$$\text{Широта} = 59. 46. 0, 40.$$

Т А Б Л И Ц А X.

Для сисканія Рефракціи.

Изъ всѣхъ новѣйшихъ Таблицъ Рефракціи, только Кенигсбергскія и Дерпнскія основанныя на большемъ числѣ наблюденій съ Рейхенбахскими Меридіональными кругами. Здѣсь дано послѣднее для разстоянія отъ зенита, отъ 0° до 85° , въ которой:

$$\text{Log Рефракціи} = \text{Log tang } Z + \alpha + A\beta + \gamma\gamma - \frac{70}{8} A\tau',$$

гдѣ τ' означаетъ градусы влупреннаго Реомюрава Термометра, (т. е. показывающаго температуру ртути въ барометрѣ). α зависитъ отъ видимаго разстоянія отъ Зенита Z , какъ и факторы A и γ ; β зависитъ отъ высоты барометра, а γ отъ вѣшняго термометра; здѣсь γ дано отъ -32° до $+32^\circ$ Реом. и β отъ 312,0 до 348,0 Парижскихъ линій (3). При Z менѣе 45° факторъ γ = Единицы и вмѣсто $\gamma\gamma$ берется γ и при Z менѣе 77° факторъ A единица и вмѣсто $A\beta$ и $\frac{70}{8} A\tau'$ брать β и $\frac{70}{8} \tau'$.

Здѣсь употреблены логарифмы пяти десятичными знаками и $A\beta$, $\gamma\gamma$ и $\frac{70}{8} A\tau'$ почтены за единицы вѣщаго знака, какъ изъ слѣдующихъ примѣровъ видно.

Примѣръ 9 й.

$$\begin{aligned} b &= 339,55. & \text{Log tang } Z &= 9,73777. \\ f &= +12,2. & \alpha &= 1,75952. \\ \tau' &= +12,5. & \beta &= + 853. \\ Z &= 28^\circ. 40'. & \gamma &= - 930. \\ & & -\frac{70}{8} \tau' &= - 109. \end{aligned}$$

$$\text{Log Рефр.} = 1,49543.$$

$$\text{Рефр.} = 31'',29.$$

Примѣръ 10 й.

$$\begin{aligned} b &= 342,4. & \text{Log tang } Z &= 0,73557. \\ f &= -18,4. & \alpha &= 1,74547. \\ \tau' &= -18,2. & A\beta &= + 1249. \\ Z &= 79^\circ. 35'. & \gamma\gamma &= + 5651. \\ & & -\frac{70}{8} A\tau' &= + 160. \end{aligned}$$

$$\text{Log Рефракц.} = 2,55164.$$

$$\text{Рефр.} = 356'',16 = 5'. 56'',16.$$

Т А Б Л И Ц А XI.

Рефракція близъ Горизонта.

Основано на наблюденіи Г. Профессора Аргеландера, который опредѣнилъ среднюю рефракцію отъ 85° до $89^\circ. 30'$ чрезъ каждыя $30'$.

Формула для вычисленія рефракціи по оной Таблицѣ слѣдующая (4)

$$\text{Log Рефракц.} = \text{Log } \zeta + A\beta + \lambda\gamma + \frac{70}{8} A\tau'$$

П Р И М Ѣ Р Ъ 11 й.

$$\begin{aligned} b &= 343,7. & \text{Log } \zeta &= 2,98095. \\ f &= +4,5. & A\beta &= + 1449. \end{aligned}$$

(3) Въ большихъ возвышеніяхъ надъ поверхностію моря высота барометра можетъ быть менѣе 312,0 линій, тогда $\beta = \text{Log } b - 2,52211$.

(4) Здѣсь факторъ λ и въ Таблицѣ X стран. 58 факторъ γ , тоже выражаетъ. β и γ изъ Табл. X числѣ 2 и 3 берется.

$$\tau' = + 5,2.$$

$$Z = 87^{\circ}. 29'.$$

$$\lambda Y = + 739.$$

$$-\frac{70}{8} A\tau' = - 47.$$

$$\text{Log Рефр.} = 5,00236.$$

$$\text{Рефр.} = 1005'',45 = 16'. 45'',45.$$

Т А Б Л И Ц А XII.

Для приведенія рефракціи Г. Спрузе въ рефракцію Г. Бесселя.

Если требуется найти вместо рефракціи Спрузе, рефракцію Бесселя, то получимъ: если рефракц. Спрузе = $100''$, то Бесселя $100 + \eta$, гдѣ η берется изъ сей Таблицы Аргументомъ вышнята термометра Реомюра; такъ будетъ въ примѣрахъ 9 и 10 по Бесселю

$$\text{Рефр. Спрузе} = 31'',29.$$

$$\text{Рефр. Спрузе} = 356'',16$$

$$31'',29 + \frac{31,5 \cdot 0,58}{100} = 31'',41 \text{ Рефр. Бесселя} \quad 356'',16 - \frac{356,2 \cdot 0,14}{100} = 355'',66 \text{ Рефр.}$$

Бесселя.

Т А Б Л И Ц А XIII.

Для вычисленія высотъ горъ измѣренныхъ барометромъ.

въ нижн. мѣстѣ

въ верх. мѣстѣ.

Да будетъ Температура воздуха τ τ' град. Реом.

Температура барометра T T' град. Реом.

Высота барометра b b' произ. размѣр.

$$\text{Назовемъ } (\text{Log } b - 10 T) - (\text{Log } b' - 10 T') = u$$

гдѣ также употребимъ логарифмы пяти десятичными знаками и переменны выражанъ въ единицахъ 5-го знака.

$\text{Log } u + A + \text{Поправ. изъ Табл. 2} = v$, которая будучи поправлена

Табл. 3 даетъ Логарифмъ возвышенія одного мѣста наблюденія надъ другимъ въ мѣтрахъ; чѣмобъ оное имѣнь въ саженяхъ, должно къ $\text{Log } v + 9,67088$

а когда желаюнь имѣнь въ тоазахъ . . . = $\text{Log } v + 9,71018$

. въ Англич. фунт. = $\text{Log } v + 0,51598$.

П Р И М Ъ Р Ъ 12 й.

На островѣ Гогландѣ наблюдаемо было въ одно и тоже время на южной сопкѣ и въ Сѣверной деревнѣ, близъ морскаго берега:

У Морскаго берега.

На Южной Сопкѣ.

$$b = 339, 07. \text{ Фр. лин.} \quad b' = 333,15 \text{ Фр. лин.}$$

$$T = +17^{\circ}, 8' \text{ Реомюра} \quad T' = +17^{\circ}, 9' \text{ Реомюра}$$

$$\tau' = +17^{\circ}, 8' \text{ Реомюра} \quad \tau' = +17^{\circ}, 9' \text{ Реомюра}$$

$$\tau + \tau' = + 35,7$$

$$\phi = 60^{\circ}.$$

$$\begin{array}{rcl}
 \text{Log } b = 2,53029. & & \text{Log } b' = 2,52250. \\
 -10 \ T = -178. & & -10 \ T' = -179. \\
 \hline
 (\text{Log } b - 10 \ T) = 2,52851. & & (\text{Log } b' - 10 \ T') = 2,52071. \\
 -(\text{Log } b' - 10 \ T) = 2,52071. & & \\
 \hline
 u = 0,00780. & & \text{Log } u = 7,89209. \\
 & & A = 4,30162. \\
 & & \text{Поправ.} = -62. \\
 & & v = 2,19309. \\
 & & \text{изъ Табл. 3} \dots + 1. \\
 & & \text{Log возвышенія } v = 2,19310. \text{ Въ мепрахъ.} \\
 & & + 0,51598. \\
 & & \hline
 & & 2,70908. \text{ Въ Англ. фунт.} \\
 & & \text{Возвышен.} = 511,8 \text{ Англ. фунт.}
 \end{array}$$

ТАБЛИЦА XIV.

Для приведенія шкалъ барометровъ изъ одного размѣренія въ другія.
Основано на сравненіи между Французской и Английской мѣрой Г. Капитера.

ПРИМѢРЪ 13й.

29,754 Англ. дюймъ: привесть въ другія размѣренія

Англ. дюйм.	Франц.	Милл.
	дюйм. лин.	
29,7 =	27 10,408	754,37.
0,05 =	0,222	0,0197.
0,001 =	0,018	0,0016.
<hr/>		
29,754 Англ. дюйм. = 27 д.	10,648 Фр. лин.	= 754,391. Милл.

ТАБЛИЦА XV.

Для приведенія шкалъ термометровъ изъ одного размѣренія въ другія.

ПРИМѢРЪ 14й.

$$\begin{array}{l}
 +17^{\circ},74 \text{ Реомюра привесть въ другія} \\
 +17,0 \text{ Реомюра} = +21,3 \dots \text{Спо град.} = 70,3 \text{ Фаренгейта} \\
 0,7 \dots \dots = 0,9 \dots \dots = 1,6 \\
 0,04 \dots \dots = 0,05 \dots \dots = 0,09. \\
 \hline
 +17,74 \text{ Реомюра} = +22,25 \text{ Спо град.} \dots = 71,99 \text{ Фаренгейта.}
 \end{array}$$

ТАБЛИЦА XVI.

Для сисканія процессіи неподвижныхъ звѣздъ.

$$\begin{array}{l}
 \text{Годовая процессія въ прямомъ восхожденіи} = m + n. \sin \alpha. \text{Tang } \delta. \\
 \text{----- въ склоненіи} \dots \dots = n. \text{Tang } \alpha
 \end{array}$$

ХП.

Гдѣ α прямое восхожденіе, а δ склоненіе означаетъ.

Ежели процессія въ годъ $=P$, то отъ начала года оно $=B'$. P гдѣ

$$B' = B + b + \lambda.$$

Гдѣ λ означаетъ западная долготы отъ Парижъ въ дробь года выражено; въ высо-
косныхъ годахъ берется въ Январѣ и Февралѣ лѣвое число.

П Р И М Ъ Р Ъ 15 й.

B' для Дерпта 1825 года 18 Апрѣля.

$$10 \text{ Апрѣля } B = 0,2738.$$

$$8 \text{ дней } \dots = + 219.$$

$$b \dots \dots = - 4.$$

$$\lambda \dots \dots = - 2.$$

$$B' = 0,2951.$$

ТАБЛИЦЫ ХVII, ХVIII, ХIX и ХХ.

Составленные изъ постоянныхъ въ *Tabulis regionum tantis* и включающъ въ себѣ все
нужные члены, — здѣсь α означаетъ прямое восхожденіе, δ склоненіе звѣзды (5) \odot
долгота солнца и \oslash долгота восходящаго узла \oslash орбиты. — Въ сихъ таблицахъ
Римскими цифрами означены зодіи.

Формула для Абераціи въ прямомъ восхожденіи: $= (A + B) \cdot \sec. \delta$.

Абераціи въ склоненіи: $\dots = (A' + B') \sin \delta + C' + D'$.

Пунаціи въ прямомъ восхожденіи: $= A + B + (C + D + D + E + F) \tan \delta$.

Пунаціи въ склоненіи $\dots = C' + D' + E' + F'$.

П Р И М Ъ Р Ъ 16 й.

Сыскавъ Абераціи и Пунаціи для звѣзды, у коей $\alpha = 199^\circ 12'; \delta = - 10^\circ 18'$ для $\frac{18}{24}$
Августа 1834 года. Изъ Мѣсяцеслова находимъ: $\odot = 150^\circ 47'; \oslash = 2 \text{ зод. } 25^\circ 8'$.

Для Абѣрр: въ прам: восх:

Абберрац: въ склоненіи.

зод.

зод.

$$\alpha = 6. \quad 19^\circ, 2 \quad A = - 12,89 \text{ Табл: ХVII Часпъ 1я. } \delta = 11. \quad 19,7 \quad A' = + 14'', 52 \text{ (a)}$$

$$\odot = 5. \quad 0,8 \quad B = + 0,83 \text{ Табл: ХVII Часпъ 2я. } \odot = 5. \quad 0,8 \quad B' = - 0,15 \text{ (b)}$$

$$\alpha - \odot = 1. \quad 18,4 \quad A + B = - 12,06. \quad \delta - \odot = 6. \quad 18,9 \quad A' + B' = + 14,37$$

$$\alpha + \odot = 11. \quad 20,0 \text{ Sec. } \delta = + 1,0164 \text{ изъ Табл: ХXI } \delta + \odot = 4. \quad 20,5 \sin \delta = - 0,1785 \text{ (c)}$$

$$(A + B) \sec. \delta = - 12,26 \text{ Аббер. въ пр: восх. } (A' + B') \sin \delta = - 2,57$$

$$\dots \dots \dots C' = + 3,81 \text{ (d)}$$

$$\dots \dots \dots D' = + 3,11 \text{ (e)}$$

$$(A' + B') \sin \delta + C' + D' = + 4,35$$

Абберрац: въ склоненіи

(a) изъ Табл: ХVIII Часпъ 1я.

(b) $\dots \dots \dots$ Часпъ 2я.

(c) изъ Табл: ХXI

(d) изъ Табл: ХVIII Часпъ 3я.

(e) $\dots \dots \dots$ Часпъ 4я.

Пушанъ въ прям. восхожд:

Пушанъ въ склоненіи.

зод.

$\odot = 2. 23^{\circ}, 1.$	$A = -15,23. C = -5,44.$	пзъ Табл. XIX Табл. 3. $C' = +7,03$	} пзъ Табл. XX
$2\odot = 10. 1,6.$	$B = +1,04. D = +0,25.$ Табл. 4. $D' = -1,12$	
$\alpha = 6. 19,2.$	$E = +0,12.$ Табл. 5. $E' = -0,54$	
$\odot = 2. 23,1.$	$F = +0,07.$ Табл. 6. $F' = -0,05$	
$\alpha - \odot = 3. 26,1.$	$C + D + E + F = -3,00.$	$C' + D' + E' + F' = +5,52$	Пушанъ.
$\alpha + \odot = 9. 12,3.$	$\text{Tang } \delta = -0,1817.$	пзъ Табл. XXI.	въ склоненіи.
$\alpha - 2\odot = 8. 17,6.$	$(C + D + E + F) \text{Tang } \delta = +0,55.$		
$\alpha - 2\odot = 1. 3,0.$	$A + B = -14,19.$	пзъ Табл. XIX Табл. 1 и 2.	
	$A + B + (C + D + E + F) \text{Tang } \delta = -13,64.$	Пушанъ въ прям. восх.	

ТАБЛИЦЫ XXII и XXIII.

Интерполациіи.

Формула въ Astronomische Nachrichten N° 33.

$$= a + tb + \frac{t \cdot t - 1}{1 \cdot 2} c + \frac{t \cdot t - 1 \cdot t - \frac{1}{2}}{1 \cdot 2 \cdot 3} d + \frac{t + 1 \cdot t \cdot t - 1 \cdot t - 2}{1 \cdot 2 \cdot 3 \cdot 4} e + \frac{t + 1 \cdot t \cdot t - 1 \cdot t - 2 \cdot t - \frac{1}{2}}{1 \cdot 2 \cdot 3 \cdot 4 \cdot 5} f + \dots$$

Въ Таблицѣ XXII вычисл:

$$\text{Log } B = \text{Log } t.$$

для $t = 0$

$$\text{Log } C = \text{Log } \frac{t \cdot t - 1}{1 \cdot 2}$$

$$t = \frac{1}{144}$$

$$\text{Log } D = \text{Log } \frac{t \cdot t - 1 \cdot t - \frac{1}{2}}{1 \cdot 2 \cdot 3}$$

$$t = \frac{2}{144}$$

$$\text{Log } E = \text{Log } \frac{t + 1 \cdot t \cdot t - 1 \cdot t - 2}{1 \cdot 2 \cdot 3 \cdot 4}$$

$$t = \frac{3}{144}$$

$$\text{Log } F = \text{Log } \frac{t + 1 \cdot t \cdot t - 1 \cdot t - 2 \cdot t - \frac{1}{2}}{1 \cdot 2 \cdot 3 \cdot 4 \cdot 5}$$

$$t = \frac{4}{144} \dots \dots \dots$$

и ш. д. взявъ 12⁷. за единицу

и такъ

$$\text{Мѣста } \odot = A(t) = A(0) + Bb + Cc + Dd + Ee + Ff.$$

ТАБЛИЦА XXIII содержишь.

$$\text{Log } C' = \text{Log } \frac{2t - 1}{1 \cdot 2}$$

$$\text{Log } D' = \text{Log } \frac{3t^2 - 3t + \frac{1}{2}}{1 \cdot 2 \cdot 3}$$

$$\text{Log } E' = \text{Log } \frac{4t^3 - 6t^2 - 2t + 2}{1 \cdot 2 \cdot 3 \cdot 4}$$

$$\text{Log } F' = \text{Log } \frac{5t^4 - 10t^3 + 5t - 1}{1 \cdot 2 \cdot 3 \cdot 4 \cdot 5} \text{ и дастъ}$$

$$\text{часовую скорость } \odot = \frac{1}{12} (b + C'c + D'd + E'e + F'f)$$

Въ Морскомъ Мѣсяцесловѣ какъ и въ другихъ Ефемеридахъ дано прѣм. восхожд. и склоненіе δ и п. н. отъ 12 до 12^ч, но какъ движеніе сего свѣтила весьма не равномерно, и ежели похотѣли бы сыскать оныя для какого либо другаго времени, то должно взять въ разсужденіе не только первую разность, но также: вторую, третью и проч.

Таблица XXII и XXIII даютъ Коэффициенты на 12^ч чрезъ 5^м для 5 разности. Въ коихъ большіи буквами выражены Коэффициенты, а малыи разности, h означающіе часовую скорость.

Употребленіе сихъ Таблицъ изъяснимъ примѣромъ.

П Р И М Ѣ Р Ъ 17 й.

Сыскать склоненіе δ и часовую скорость на $\frac{9}{21}$ Сентября 1834 года для 5^ч. 30^м, 5^ч. 40^м, 5^ч. 50^м, 6^ч. сред. Гренич. время

Возмемъ изъ Морскаго Мѣсяцеслова на сей годъ на

Склоненіе δ 1 Разн. 2 Разн. 3 Разн. 4 Разн. 5 Разн.

$\frac{3}{20}$ Сент. 0 ^ч = + 5°. 39'. 47", 5						$b = + 2°. 13'. 13", 3 = + 7993", 3 = \text{Log } b = 3,9027261$
12 = .. 8. 2. 41,6	+ 2°. 22'. 54", 1					$c = - 6. 4,7 = - 364,7 = \text{Log } c = 2,56194 n$
$\frac{9}{21}$ Сент. 0 = .. 10. 21. 21,6	+ 2. 18. 40,0	- 4. 14,1				$d = - 1. 16,0 = - 76,0 = \text{Log } d = 1,88081 n$
12 = .. 12. 34. 34,9	+ 2. 13. 13,3	- 5. 26,7	- 1. 12,6			$e = - 3,85 = - 3,9 = \text{Log } e = 0,59106 n$
$\frac{10}{22}$ Сент. 0 = .. 14. 41. 5,5	+ 2. 6. 30,6	- 6. 42,7	- 1. 16,0	- 3,4		$f = - 0,9 = - 0,9 = \text{Log } f = 9,95424 n$
12 = .. 16. 39. 33,1	+ 1. 58. 27,6	- 8. 3,0	- 1. 20,4	- 4,3	- 0,9	

Склоненіе δ .

Для 5ч. 50м. 5ч. 55м. 6ч. 0м. 6ч. 5м.

Часовая скорость δ въ склоненіи.

Для 5ч. 50м. 5ч. 55м. 6ч. 0м. 6ч. 5м.

Log b	3,9027261.	3,9027261.	3,9027261.	3,9027261.	Log c	2,56194 n	2,56194 n	2,56194 n	2,56194 n
Log B	9,6867355.	9,6928959.	9,6989700.	9,7049604.	Log C'	8,14267 n	7,84164 n	∞	7,84164 n
Log $Bb = 3,5894616.$	3,5956220.	3,6016961.	3,6076865.		Log $C'e = 0,70461.$	0,40358.	∞	0,40358 n	
Log c	2,56194 n	2,56194 n	2,56194 n	2,56194 n	Log d	1,88081 n	1,88081 n	1,88081 n	1,88081 n
Log C	9,09657 n	9,09683 n	9,09691 n	9,09683 n	Log D'	8,61878 n	8,61954 n	8,61979 n	8,61954 n
Log $Cc = 1,65851.$	1,65877.	1,65885.	1,65877.		Log $D'd = 0,49959.$	0,50035.	0,50060.	0,50035.	
Log d	1,88081 n	1,88081 n	1,88081 n	1,88081 n	Log e	0,59106 n	0,59106 n	0,59106 n	0,59106 n
Log D	6,76210.	6,46134	∞	6,46134 n	Log E'	7,46136	7,16038.	∞	7,16038 n
Log $Dd = 8,64291 n$	8,34215 n	∞	8,34215.		Log $E'e = 8,05242 n$	7,75144 n	∞	7,75144.	
Log e	0,59106 n	0,59106 n	0,59106 n	0,59106 n	Log f	9,95424 n	9,95424 n	9,95424 n	9,95424 n
Log E	8,36954.	8,36982.	8,36991.	8,36982	Log F'	7,66982.	7,67066.	7,67094.	7,67066.
Log $Ee = 8,96060 n$	8,96088 n	8,96097 n	8,96088 n		Log $F'f = 7,62406 n$	7,62490 n	7,62518 n	7,62490 n	
Log f	9,95424 n	9,95424 n	9,95424 n	9,95424 n					
Log F	5,81324 n	5,51249 n	∞	5,51219.					
Log Ff	5,76748.	5,46673.	∞	5,46673 n					
$A(a)$	10°. 21'. 21", 6.	10°. 21'. 21", 6.	10°. 21'. 21", 6.	10°. 21'. 21", 6.	$b = 2°. 13'. 13", 3.$	2°. 13'. 13", 3.	2°. 13'. 13", 3.	2°. 13'. 13", 3.	
$Bb = + 1. 4. 45,63.$	1. 5. 41,14.	1. 6. 36,65.	1. 7. 32,16.		$C'e = + 5,07. + 2,53.$	0,0. —	2,53.		
$Cc = + 45,55.$	+ 45,58.	+ 45,59.	+ 45,58.		$D'd = + 3,16. + 3,17. + 3,17. + 3,17.$				
$Dd = - 0,04.$	- 0,02.	0,00. + 0,02.			$E'e = - 0,01. - 0,01. - 0,01. + 0,01.$				
$Ee = - 0,09.$	- 0,09.	0,09. - 0,09.			$Ff = 0,0 0,0 0,0 0,0$				
$Ff = 0,00.$	0,00.	0,00.	0,00.		12. $h = 2. 13. 21,52. 2. 13. 18,99. 2. 13. 16,47. 2. 13. 13,95.$				
$A(t)$ Ис. ск. 11. 23. 52,65.	11. 27. 48,21.	11. 28. 43,75.	11. 29. 39,27.	$h = \text{часов. скор.} = 11. 6,79. 11. 6,58. 11. 6,37. 11. 6,16.$					

ТАБЛИЦА I.

Для превращенія Градус. во времяш.

Градусы.		Минуш.			Секунды.	
Ч	м	°	м.	с.	''	сек.
1	0.	4	1	0.	4	0, 07
2	0.	8	2	0.	8	0, 13
3	0.	12	3	0.	12	0, 20
4	0.	16	4	0.	16	0, 27
5	0.	20	5	0.	20	0, 33
6	0.	24	6	0.	24	0, 40
7	0.	28	7	0.	28	0, 47
8	0.	32	8	0.	32	0, 53
9	0.	36	9	0.	36	0, 60
10	0.	40	10	0.	40	0, 67
11	0.	44	11	0.	44	0, 73
12	0.	48	12	0.	48	0, 80
13	0.	52	13	0.	52	0, 87
14	0.	56	14	0.	56	0, 93
15	1.	0	15	1.	0	1, 00
16	1.	4	16	1.	4	1, 07
17	1.	8	17	1.	8	1, 13
18	1.	12	18	1.	12	1, 20
19	1.	16	19	1.	16	1, 27
20	1.	20	20	1.	20	1, 33
21	1.	24	21	1.	24	1, 40
22	1.	28	22	1.	28	1, 47
23	1.	32	23	1.	32	1, 53
24	1.	36	24	1.	36	1, 60
25	1.	40	25	1.	40	1, 67
26	1.	44	26	1.	44	1, 73
27	1.	48	27	1.	48	1, 80
28	1.	52	28	1.	52	1, 87
29	1.	56	29	1.	56	1, 93
30	2.	0	30	2.	0	2, 00
31	2.	4	31	2.	4	2, 07
32	2.	8	32	2.	8	2, 13
33	2.	12	33	2.	12	2, 20
34	2.	16	34	2.	16	2, 27
35	2.	20	35	2.	20	2, 33
36	2.	24	36	2.	24	2, 40
37	2.	28	37	2.	28	2, 47
38	2.	32	38	2.	32	2, 53
39	2.	36	39	2.	36	2, 60
40	2.	40	40	2.	40	2, 67
41	2.	44	41	2.	44	2, 73
42	2.	48	42	2.	48	2, 80
43	2.	52	43	2.	52	2, 87
44	2.	56	44	2.	56	2, 93
45	3.	0	45	3.	0	3, 00
46	3.	4	46	3.	4	3, 07
47	3.	8	47	3.	8	3, 13
48	3.	12	48	3.	12	3, 20
49	3.	16	49	3.	16	3, 27
50	3.	20	50	3.	20	3, 33
51	3.	24	51	3.	24	3, 40
52	3.	28	52	3.	28	3, 47
53	3.	32	53	3.	32	3, 53
54	3.	36	54	3.	36	3, 60
55	3.	40	55	3.	40	3, 67
56	3.	44	56	3.	44	3, 73
57	3.	48	57	3.	48	3, 80
58	3.	52	58	3.	52	3, 87
59	3.	56	59	3.	56	3, 93
60	4.	0	60	4.	0	4, 00

ТАБЛИЦА II.

Для превращенія время въ Градусы.

Часы.		Минуш.			Секунды.	
Ч.	°	м.	°	с.	''	''
1	15	1	0.	15	1	0. 15
2	30	2	0.	30	2	0. 30
3	45	3	0.	45	3	0. 45
4	60	4	1.	0	4	1. 0
5	75	5	1.	15	5	1. 15
6	90	6	1.	30	6	1. 30
7	105	7	1.	45	7	1. 45
8	120	8	2.	0	8	2. 0
9	135	9	2.	15	9	2. 15
10	150	10	2.	30	10	2. 30
11	165	11	2.	45	11	2. 45
12	180	12	3.	0	12	3. 0
13	195	13	3.	15	13	3. 15
14	210	14	3.	30	14	3. 30
15	225	15	3.	45	15	3. 45
16	240	16	4.	0	16	4. 0
17	255	17	4.	15	17	4. 15
18	270	18	4.	30	18	4. 30
19	285	19	4.	45	19	4. 45
20	300	20	5.	0	20	5. 0
21	315	21	5.	15	21	5. 15
22	330	22	5.	30	22	5. 30
23	345	23	5.	45	23	5. 45
24	360	24	6.	0	24	6. 0
25		25	6.	15	25	6. 15
26		26	6.	30	26	6. 30
27		27	6.	45	27	6. 45
28		28	7.	0	28	7. 0
29		29	7.	15	29	7. 15
30		30	7.	30	30	7. 30
31		31	7.	45	31	7. 45
32		32	8.	0	32	8. 0
33		33	8.	15	33	8. 15
34		34	8.	30	34	8. 30
35		35	8.	45	35	8. 45
36		36	9.	0	36	9. 0
37		37	9.	15	37	9. 15
38		38	9.	30	38	9. 30
39		39	9.	45	39	9. 45
40		40	10.	0	40	10. 0
41		41	10.	15	41	10. 15
42		42	10.	30	42	10. 30
43		43	10.	45	43	10. 45
44		44	11.	0	44	11. 0
45		45	11.	15	45	11. 15
46		46	11.	30	46	11. 30
47		47	11.	45	47	11. 45
48		48	12.	0	48	12. 0
49		49	12.	15	49	12. 15
50		50	12.	30	50	12. 30
51		51	12.	45	51	12. 45
52		52	13.	0	52	13. 0
53		53	13.	15	53	13. 15
54		54	13.	30	54	13. 30
55		55	13.	45	55	13. 45
56		56	14.	0	56	14. 0
57		57	14.	15	57	14. 15
58		58	14.	30	58	14. 30
59		59	14.	45	59	14. 45
60		60	15.	0	60	15. 0

Для превращения звѣзднаго времени въ среднее солнечное время и обратно.

0 ^h				1 ^h				2 ^h			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
0. 37	0. 0,1	30. 31	0. 5,0	0. 26	0. 9,9	30. 20	0. 14,8	0. 15	0. 19,7	30. 10	0. 24,6
1. 13	0,2	31. 8	5,1	1. 2	0. 10,0	30. 57	14,9	0. 52	19,8	30. 46	24,7
1. 50	0,3	31. 44	5,2	1. 39	10,1	31. 31	0. 15,0	1. 28	19,9	31. 23	24,8
2. 26	0,4	32. 21	5,3	2. 16	10,2	32. 10	15,1	2. 5	0. 20,0	31. 59	24,9
3. 3	0,5	32. 58	5,4	2. 52	10,3	32. 47	15,2	2. 41	20,1	32. 36	0. 25,0
3. 40	0,6	33. 34	5,5	3. 29	10,4	33. 24	15,3	3. 19	20,2	33. 13	25,1
4. 16	0,7	34. 11	5,6	4. 6	10,5	34. 0	15,4	3. 55	20,3	33. 49	25,2
4. 53	0,8	34. 48	5,7	4. 42	10,6	34. 37	15,5	4. 31	20,4	34. 26	25,3
5. 30	0,9	35. 24	5,8	5. 19	10,7	35. 13	15,6	5. 8	20,5	35. 3	25,4
6. 6	0. 1,0	36. 1	5,9	5. 55	10,8	35. 50	15,7	5. 45	20,6	35. 39	25,5
6. 43	1,1	36. 37	0. 6,0	6. 32	10,9	36. 27	15,8	6. 21	20,7	36. 16	25,6
7. 19	1,2	37. 14	6,1	7. 9	0. 11,0	37. 3	15,9	6. 58	20,8	36. 52	25,7
7. 56	1,3	37. 51	6,2	7. 45	11,1	37. 40	0. 16,0	7. 34	20,9	37. 29	25,8
8. 33	1,4	38. 27	6,3	8. 22	11,2	38. 17	16,1	8. 11	0. 21,0	38. 6	25,9
9. 9	1,5	39. 4	6,4	8. 59	11,3	38. 53	16,2	8. 48	21,1	38. 42	0. 26,0
9. 46	1,6	39. 41	6,5	9. 35	11,4	39. 30	16,3	9. 24	21,2	39. 19	26,1
10. 23	1,7	40. 17	6,6	10. 12	11,5	40. 6	16,4	10. 1	21,3	39. 56	26,2
10. 59	1,8	40. 54	6,7	10. 48	11,6	40. 43	16,5	10. 38	21,4	40. 32	26,3
11. 36	1,9	41. 30	6,8	11. 25	11,7	41. 20	16,6	11. 14	21,5	41. 9	26,4
12. 12	0. 2,0	42. 7	6,9	12. 2	11,8	41. 56	16,7	11. 51	21,6	41. 45	26,5
12. 49	2,1	42. 44	0. 7,0	12. 38	11,9	42. 33	16,8	12. 27	21,7	42. 22	26,6
13. 26	2,2	43. 20	7,1	13. 15	0. 12,0	43. 9	16,9	13. 4	21,8	42. 59	26,7
14. 2	2,3	43. 57	7,2	13. 52	12,1	43. 46	0. 17,0	13. 41	21,9	43. 35	26,8
14. 39	2,4	44. 34	7,3	14. 28	12,2	44. 23	17,1	14. 17	0. 22,0	44. 12	26,9
15. 16	2,5	45. 10	7,4	15. 5	12,3	44. 59	17,2	14. 54	22,1	44. 49	0. 27,0
15. 52	2,6	45. 47	7,5	15. 41	12,4	45. 36	17,3	15. 31	22,2	45. 25	27,1
16. 29	2,7	46. 23	7,6	16. 18	12,5	46. 13	17,4	16. 7	22,3	46. 2	27,2
17. 5	2,8	47. 0	7,7	16. 55	12,6	46. 49	17,5	16. 44	22,4	46. 38	27,3
17. 42	2,9	47. 37	7,8	17. 31	12,7	47. 26	17,6	17. 20	22,5	47. 15	27,4
18. 19	0. 3,0	48. 13	7,9	18. 8	12,8	48. 2	17,7	17. 58	22,6	47. 52	27,5
18. 55	3,1	48. 50	0. 8,0	18. 44	12,9	48. 39	17,8	18. 34	22,7	48. 28	27,6
19. 32	3,2	49. 27	8,1	19. 21	0. 13,0	49. 16	17,9	19. 10	22,8	49. 5	27,7
20. 9	3,3	50. 3	8,2	19. 58	13,1	49. 52	0. 18,0	19. 47	22,9	49. 42	27,8
20. 45	3,4	50. 40	8,3	20. 34	13,2	50. 29	18,1	20. 24	0. 23,0	50. 18	27,9
21. 22	3,5	51. 16	8,4	21. 11	13,3	51. 6	18,2	21. 0	23,1	50. 55	0. 28,0
21. 58	3,6	51. 53	8,5	21. 48	13,4	51. 42	18,3	21. 37	23,2	51. 31	28,1
22. 35	3,7	52. 30	8,6	22. 24	13,5	52. 19	18,4	22. 13	23,3	52. 8	28,2
23. 12	3,8	53. 6	8,7	23. 1	13,6	52. 55	18,5	22. 50	23,4	52. 45	28,3
23. 48	3,9	53. 43	8,8	23. 38	13,7	53. 32	18,6	23. 27	23,5	53. 21	28,4
24. 25	0. 4,0	54. 20	8,9	24. 14	13,8	54. 9	18,7	24. 3	23,6	53. 58	28,5
25. 2	4,1	54. 56	0. 9,0	24. 51	13,9	54. 45	18,8	24. 40	23,7	54. 35	28,6
25. 38	4,2	55. 33	9,1	25. 27	0. 14,0	55. 22	18,9	25. 17	23,8	55. 11	28,7
26. 15	4,3	56. 9	9,2	26. 4	14,1	55. 59	0. 19,0	25. 53	23,9	55. 48	28,8
26. 51	4,4	56. 46	9,3	26. 41	14,2	56. 35	19,1	26. 30	0. 24,0	56. 24	28,9
27. 28	4,5	57. 23	9,4	27. 17	14,3	57. 12	19,2	27. 6	24,1	57. 1	0. 29,0
28. 5	4,6	57. 59	9,5	27. 54	14,4	57. 48	19,3	27. 43	24,2	57. 38	29,1
28. 41	4,7	58. 36	9,6	28. 31	14,5	58. 25	19,4	28. 20	24,3	58. 14	29,2
29. 18	4,8	59. 13	9,7	29. 7	14,6	59. 2	19,5	28. 56	24,4	58. 51	29,3
29. 55	4,9	59. 49	9,8	29. 44	14,7	59. 38	19,6	29. 33	24,5	59. 28	29,4

Продолженіе.

3 ^ч				4 ^ч				5 ^ч			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
0. 4	0. 29,5	29. 59	0. 34,4	0. 30	0. 39,4	30. 25	0. 44,3	0. 19	0. 49,2	30. 14	0. 54,1
0. 41	29,6	30. 35	34,5	1. 7	39,5	31. 1	44,4	0. 56	49,3	30. 50	54,2
1. 17	29,7	31. 12	34,6	1. 43	39,6	31. 38	44,5	1. 32	49,4	31. 27	54,3
1. 54	29,8	31. 49	34,7	2. 20	39,7	32. 14	44,6	2. 9	49,5	32. 4	54,4
2. 31	29,9	32. 25	34,8	2. 56	39,8	32. 51	44,7	2. 46	49,6	32. 40	54,5
3. 7	0. 30,0	33. 2	34,9	3. 33	39,9	33. 28	44,8	3. 22	49,7	33. 17	54,6
3. 44	30,1	33. 38	0. 35,0	4. 10	0. 40,0	34. 4	44,9	3. 59	49,8	33. 53	54,7
4. 21	30,2	34. 15	35,1	4. 46	40,1	34. 41	0. 45,0	4. 35	49,9	34. 30	54,8
4. 57	30,3	34. 52	35,2	5. 23	40,2	35. 18	45,1	5. 12	0. 50,0	35. 7	54,9
5. 33	30,4	35. 28	35,3	6. 0	40,3	35. 54	45,2	5. 49	50,1	35. 43	0. 55,0
6. 10	30,5	36. 5	35,4	6. 36	40,4	36. 31	45,3	6. 25	50,2	36. 20	55,1
6. 47	35,6	36. 42	35,5	7. 13	40,5	37. 7	45,4	7. 2	50,3	36. 57	55,2
7. 24	30,7	37. 18	35,6	7. 49	40,6	37. 44	45,5	7. 39	50,4	37. 33	55,3
8. 0	30,8	37. 55	35,7	8. 26	40,7	38. 21	45,6	8. 15	50,5	38. 10	55,4
8. 37	30,9	38. 31	35,8	9. 3	40,8	38. 57	45,7	8. 52	50,6	38. 46	55,5
9. 14	0. 31,0	39. 8	35,9	9. 39	40,9	39. 34	45,8	9. 28	50,7	39. 23	55,6
9. 50	31,1	39. 45	0. 36,0	10. 16	0. 41,0	40. 10	45,9	10. 5	50,8	40. 0	55,7
10. 27	31,2	40. 21	36,1	10. 53	41,1	40. 47	0. 46,0	10. 42	50,9	40. 36	55,8
11. 3	31,3	40. 58	36,2	11. 29	41,2	41. 24	46,1	11. 18	0. 51,0	41. 13	55,9
11. 40	31,4	41. 35	36,3	12. 6	41,3	42. 0	46,2	11. 55	51,1	41. 50	0. 56,0
12. 17	31,5	42. 11	36,4	12. 42	41,4	42. 37	46,3	12. 32	51,2	42. 26	56,1
12. 53	31,6	42. 48	36,5	13. 19	41,5	43. 14	46,4	13. 8	51,3	43. 3	56,2
13. 30	31,7	43. 24	36,6	13. 56	41,6	43. 50	46,5	13. 45	51,4	43. 40	56,3
14. 7	31,8	44. 1	36,7	14. 32	41,7	44. 27	46,6	14. 21	51,5	44. 16	56,4
14. 43	31,9	44. 38	36,8	15. 9	41,8	45. 4	46,7	14. 58	51,6	44. 53	56,5
15. 20	0. 32,0	45. 14	36,9	15. 46	41,9	45. 40	46,8	15. 35	51,7	45. 29	56,6
15. 56	32,1	45. 51	0. 37,0	16. 22	0. 42,0	46. 17	46,9	16. 11	51,8	46. 6	56,7
16. 33	32,2	46. 28	37,1	16. 59	42,1	46. 53	0. 47,0	16. 48	51,9	46. 43	56,8
17. 10	32,3	47. 4	37,2	17. 35	42,2	47. 30	47,1	17. 25	0. 52,0	47. 19	56,9
17. 46	32,4	47. 41	37,3	18. 12	42,3	48. 7	47,2	18. 1	52,1	47. 56	0. 57,0
18. 23	32,5	48. 17	37,4	18. 49	42,4	48. 43	47,3	18. 38	52,2	48. 32	57,1
19. 0	32,6	48. 54	37,5	19. 25	42,5	49. 20	47,4	19. 14	52,3	49. 9	57,2
19. 36	32,7	49. 31	37,6	20. 2	42,6	49. 57	47,5	19. 51	52,4	49. 46	57,3
20. 13	32,8	50. 7	37,7	20. 39	42,7	50. 33	47,6	20. 28	52,5	50. 22	57,4
20. 49	32,9	50. 44	37,8	21. 15	42,8	51. 10	47,7	21. 4	52,6	50. 59	57,5
21. 26	0. 33,0	51. 21	37,9	21. 52	42,9	51. 46	47,8	21. 41	52,7	51. 36	57,6
22. 3	33,1	51. 57	0. 38,0	22. 28	0. 43,0	52. 23	47,9	22. 18	52,8	52. 12	57,7
22. 39	33,2	52. 34	38,1	23. 5	43,1	53. 0	0. 48,0	22. 54	52,9	52. 49	57,8
23. 16	33,3	53. 10	38,2	23. 42	43,2	53. 36	48,1	23. 31	0. 53,0	53. 25	57,9
23. 52	33,4	53. 47	38,3	24. 18	43,3	54. 13	48,2	24. 7	53,1	54. 2	0. 58,0
24. 29	33,5	54. 24	38,4	24. 55	43,4	54. 50	48,3	24. 44	53,2	54. 39	58,1
25. 6	33,6	55. 0	38,5	25. 32	43,5	55. 26	48,4	25. 21	53,3	55. 15	58,2
25. 42	33,7	55. 37	38,6	26. 8	43,6	56. 3	48,5	25. 57	53,4	55. 52	58,3
26. 19	33,8	56. 14	38,7	26. 45	43,7	56. 39	48,6	26. 34	53,5	56. 29	58,4
26. 56	33,9	56. 50	38,8	27. 21	43,8	57. 16	48,7	27. 11	53,6	57. 5	58,5
27. 32	0. 34,0	57. 27	38,9	27. 58	43,9	57. 53	48,8	27. 47	53,7	57. 42	58,6
28. 9	34,1	58. 3	0. 39,0	28. 35	0. 44,0	58. 29	48,9	28. 24	53,8	58. 18	58,7
28. 45	34,2	58. 40	39,1	29. 11	44,1	59. 6	0. 49,0	29. 0	53,9	58. 55	58,8
29. 22	34,3	59. 17	39,2	29. 48	44,2	59. 43	49,1	29. 37	0. 54,0	59. 32	58,9
		59. 53	39,3								

"
4 0,01
7 0,02
11 0,03
15 0,04
18 0,05
22 0,06
26 0,07
29 0,08
33 0,09

Продолженіе.

" " "
1.13,0,2
1.50,0,3

6 ^ч				7 ^ч				8 ^ч			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
0. 8	0,59,0	30. 3	1. 3,9	0. 34	1. 8,9	30. 29	1. 13,8	0. 23	1. 18,7	30. 18	1. 23,6
0. 45	59,1	30. 40	1. 4,0	1. 11	1. 9,0	31. 5	13,9	1. 0	18,8	30. 54	23,7
1. 22	59,2	31. 16	4,1	1. 47	9,1	31. 42	1. 14,0	1. 36	18,9	31. 31	23,8
1. 58	59,3	31. 53	4,2	2. 24	9,2	32. 19	14,1	2. 13	1. 19,0	32. 8	23,9
2. 35	59,4	32. 29	4,3	3. 1	9,3	32. 55	14,2	2. 50	19,1	32. 44	1. 24,0
3. 11	59,5	33. 6	4,4	3. 37	9,4	33. 32	14,3	3. 26	19,2	33. 21	24,1
3. 48	59,6	33. 43	4,5	4. 14	9,5	34. 8	14,4	4. 3	19,3	33. 58	24,2
4. 25	59,7	34. 19	4,6	4. 50	9,6	34. 45	14,5	4. 40	19,4	34. 34	24,3
5. 1	59,8	34. 56	4,7	5. 27	9,7	35. 22	14,6	5. 16	19,5	35. 11	24,4
5. 38	59,9	35. 33	4,8	6. 4	9,8	35. 58	14,7	5. 53	19,6	35. 47	24,5
6. 15	1. 0,0	36. 9	4,9	6. 40	9,9	36. 35	14,8	6. 30	19,7	36. 24	24,6
6. 51	0,1	36. 46	1. 5,0	7. 17	1. 10,0	37. 12	14,9	7. 6	19,8	37. 1	24,7
7. 28	0,2	37. 22	5,1	7. 54	10,1	37. 48	1. 15,0	7. 43	19,9	37. 37	24,8
8. 4	0,3	37. 59	5,2	8. 30	10,2	38. 25	15,1	8. 19	1. 20,0	38. 14	24,9
8. 41	0,4	38. 36	5,3	9. 7	10,3	39. 1	15,2	8. 56	20,1	38. 51	1. 25,0
9. 18	0,5	39. 12	5,4	9. 43	10,4	39. 38	15,3	9. 33	20,2	39. 27	25,1
9. 54	0,6	39. 49	5,5	10. 20	10,5	40. 15	15,4	10. 9	20,3	40. 4	25,2
10. 31	0,7	40. 26	5,6	10. 57	10,6	40. 51	15,5	10. 46	20,4	40. 40	25,3
11. 8	0,8	41. 2	5,7	11. 33	10,7	41. 28	15,6	11. 23	20,5	41. 17	25,4
11. 44	0,9	41. 39	5,8	12. 10	10,8	42. 5	15,7	11. 59	20,6	41. 54	25,5
12. 21	1. 1,0	42. 15	5,9	12. 47	10,9	42. 41	15,8	12. 36	20,7	42. 30	25,6
12. 57	1,1	42. 52	1. 6,0	13. 23	1. 11,0	43. 18	15,9	13. 12	20,8	43. 7	25,7
13. 34	1,2	43. 29	6,1	14. 0	11,1	43. 54	1. 16,0	13. 49	20,9	43. 44	25,8
14. 11	1,3	44. 5	6,2	14. 36	11,2	44. 31	16,1	14. 26	1. 21,0	44. 20	25,9
14. 47	1,4	44. 42	6,3	15. 13	11,3	45. 8	16,2	15. 2	21,1	44. 57	1. 26,0
15. 24	1,5	45. 18	6,4	15. 50	11,4	45. 44	16,3	15. 39	21,2	45. 33	26,1
16. 1	1,6	45. 55	6,5	16. 26	11,5	46. 21	16,4	16. 16	21,3	46. 10	26,2
16. 37	1,7	46. 32	6,6	17. 3	11,6	46. 58	16,5	16. 52	21,4	46. 47	26,3
17. 14	1,8	47. 8	6,7	17. 40	11,7	47. 34	16,6	17. 29	21,5	46. 23	26,4
17. 50	1,9	47. 45	6,8	18. 16	11,8	48. 11	16,7	18. 5	21,6	48. 0	26,5
18. 27	1. 2,0	48. 22	6,9	18. 53	11,9	48. 47	16,8	18. 42	21,7	48. 37	26,6
19. 4	2,1	48. 58	1. 7,0	19. 29	1. 12,0	49. 24	16,9	19. 19	21,8	49. 13	26,7
19. 40	2,2	49. 35	7,1	20. 6	12,1	50. 1	1. 17,0	19. 55	21,9	49. 50	26,8
20. 17	2,3	50. 11	7,2	20. 43	12,2	50. 37	17,1	20. 32	1. 22,0	50. 26	26,9
20. 54	2,4	50. 48	7,3	21. 19	12,3	51. 14	17,2	21. 9	22,1	51. 3	1. 27,0
21. 30	2,5	51. 25	7,4	21. 56	12,4	51. 51	17,3	21. 45	22,2	51. 40	27,1
22. 7	2,6	52. 1	7,5	22. 33	12,5	52. 27	17,4	22. 22	22,3	52. 16	27,2
22. 43	2,7	52. 38	7,6	23. 9	12,6	53. 4	17,5	22. 58	22,4	52. 53	27,3
23. 20	2,8	53. 15	7,7	23. 46	12,7	53. 40	17,6	23. 35	22,5	53. 30	27,4
23. 57	2,9	53. 51	7,8	24. 22	12,8	54. 17	17,7	24. 12	22,6	54. 6	27,5
24. 33	1. 3,0	54. 28	7,9	24. 59	12,9	54. 54	17,8	24. 48	22,7	54. 43	27,6
25. 10	3,1	55. 4	1. 8,0	25. 36	1. 13,0	55. 30	17,9	25. 25	22,8	55. 19	27,7
25. 47	3,2	55. 41	8,1	26. 12	13,1	56. 7	1. 18,0	26. 1	22,9	55. 56	27,8
26. 23	3,3	56. 18	8,2	26. 49	13,2	56. 44	18,1	26. 38	1. 23,0	56. 33	27,9
27. 0	3,4	56. 54	8,3	27. 26	13,3	57. 20	18,2	27. 15	23,1	57. 9	1. 28,0
27. 36	3,5	57. 31	8,4	28. 2	13,4	57. 57	18,3	27. 51	23,2	57. 46	28,1
28. 13	3,6	58. 8	8,5	28. 39	13,5	58. 33	18,4	28. 28	23,3	58. 23	28,2
28. 50	3,7	58. 44	8,6	29. 15	13,6	59. 10	18,5	29. 5	23,4	58. 59	28,3
29. 26	3,8	59. 21	8,7	29. 52	13,7	59. 47	18,6	29. 41	23,5	59. 36	28,4
		59. 57	8,8								

Продолжение.

9 ^ч				10 ^ч				11 ^ч			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
0. 12	1. 28,5	30. 7	1. 33,4	0. 2	1. 38,3	29. 56	1. 43,2	0. 27	1. 48,2	30. 22	1. 53,1
0. 49	28,6	30. 44	33,5	0. 38	38,4	30. 33	43,3	1. 4	48,3	30. 59	53,2
1. 26	28,7	31. 20	33,6	1. 15	38,5	31. 9	43,4	1. 41	48,4	31. 35	53,3
2. 2	28,8	31. 57	33,7	1. 52	38,6	31. 46	43,5	2. 17	48,5	32. 12	53,4
2. 39	28,9	32. 34	33,8	2. 28	38,7	32. 23	43,6	2. 54	48,6	32. 49	53,5
3. 16	1. 29,0	33. 10	33,9	3. 5	38,8	32. 59	43,7	3. 31	48,7	33. 25	53,6
3. 52	29,1	33. 47	1. 34,0	3. 41	38,9	33. 36	43,8	4. 7	48,8	34. 2	53,7
4. 29	29,2	34. 23	34,1	4. 18	1. 39,0	34. 13	43,9	4. 44	48,9	34. 38	53,8
5. 6	29,3	35. 0	34,2	4. 55	39,1	34. 49	1. 44,0	5. 20	1. 49,0	35. 15	53,9
5. 42	29,4	35. 37	34,3	5. 31	39,2	35. 26	44,1	5. 57	49,1	35. 52	1. 54,0
6. 19	29,5	36. 13	34,4	6. 8	39,3	36. 2	44,2	6. 34	49,2	36. 28	54,1
6. 55	29,6	36. 50	34,5	6. 44	39,4	36. 39	44,3	7. 10	49,3	37. 5	54,2
7. 32	29,7	37. 27	34,6	7. 21	39,5	37. 16	44,4	7. 47	49,4	37. 42	54,3
8. 9	29,8	38. 3	34,7	7. 58	39,6	37. 52	44,5	8. 24	49,5	38. 18	54,4
8. 45	29,9	38. 40	34,8	8. 34	39,7	38. 29	44,6	9. 0	49,6	38. 55	54,5
9. 22	1. 30,0	39. 16	34,9	9. 11	39,8	39. 6	44,7	9. 37	49,7	39. 31	54,6
9. 58	30,1	39. 53	1. 35,0	9. 48	39,9	39. 42	44,8	10. 13	49,8	40. 8	54,7
10. 35	30,2	40. 30	35,1	10. 24	1. 40,0	40. 19	44,9	10. 50	49,9	40. 45	54,8
11. 12	30,3	41. 6	35,2	11. 1	40,1	40. 55	1. 45,0	11. 27	1. 50,0	41. 21	54,9
11. 48	30,4	41. 43	35,3	11. 37	40,2	41. 32	45,1	12. 3	50,1	41. 58	1. 55,0
12. 25	30,5	42. 20	35,4	12. 14	40,3	42. 9	45,2	12. 40	50,2	42. 35	55,1
13. 2	30,6	42. 56	35,5	12. 51	40,4	42. 45	45,3	13. 17	50,3	43. 11	55,2
13. 38	30,7	43. 33	35,6	13. 27	40,5	43. 22	45,4	13. 53	50,4	43. 48	55,3
14. 15	30,8	44. 9	35,7	14. 4	40,6	43. 59	45,5	14. 30	50,5	44. 24	55,4
14. 51	30,9	44. 46	35,8	14. 41	40,7	44. 35	45,6	15. 6	50,6	45. 1	55,5
15. 28	1. 31,0	45. 23	35,9	15. 17	40,8	45. 12	45,7	15. 43	50,7	45. 38	55,6
16. 5	31,1	45. 59	1. 36,0	15. 54	40,9	45. 48	45,8	16. 20	50,8	46. 14	55,7
16. 41	31,2	46. 36	36,1	16. 30	1. 41,0	46. 25	45,9	16. 56	50,9	46. 51	55,8
17. 18	31,3	47. 13	36,2	17. 7	41,1	47. 2	1. 46,0	17. 33	1. 51,0	47. 27	55,9
17. 55	31,4	47. 49	36,3	17. 44	41,2	47. 38	46,1	18. 10	51,1	18. 4	1. 56,0
18. 31	31,5	48. 26	36,4	18. 20	41,3	48. 15	46,2	18. 46	51,2	18. 41	56,1
19. 8	31,6	49. 2	36,5	18. 57	41,4	48. 52	46,3	19. 23	51,3	49. 17	56,2
19. 44	31,7	49. 39	36,6	19. 34	41,5	49. 28	46,4	19. 59	51,4	49. 54	56,3
20. 21	31,8	50. 16	36,7	20. 10	41,6	50. 5	46,5	20. 36	51,5	50. 31	56,4
20. 58	31,9	50. 52	36,8	20. 47	41,7	50. 41	46,6	21. 13	51,6	51. 7	56,5
21. 34	1. 32,0	51. 29	36,9	21. 23	41,8	51. 18	46,7	21. 49	51,7	51. 44	56,6
22. 11	32,1	52. 6	1. 37,0	22. 0	41,9	51. 55	46,8	22. 26	51,8	52. 20	56,7
22. 48	32,2	52. 42	37,1	22. 37	1. 42,0	52. 31	46,9	23. 2	51,9	52. 57	56,8
23. 24	32,3	53. 19	37,2	23. 13	42,1	53. 8	1. 47,0	23. 39	1. 52,0	53. 34	56,9
24. 1	32,4	53. 55	37,3	23. 50	42,2	53. 45	47,1	24. 16	52,1	54. 10	1. 57,0
24. 37	32,5	54. 32	37,4	24. 27	42,3	54. 21	47,2	24. 52	52,2	54. 47	57,1
25. 14	32,6	55. 9	37,5	25. 3	42,4	54. 58	47,3	25. 29	52,3	55. 24	57,2
25. 51	32,7	55. 45	37,6	25. 40	42,5	55. 34	47,4	26. 6	52,4	56. 0	57,3
26. 27	32,8	56. 22	37,7	26. 16	42,6	56. 11	47,5	26. 42	52,5	56. 37	57,4
27. 4	32,9	56. 59	37,8	26. 53	42,7	56. 48	47,6	27. 19	52,6	57. 13	57,5
27. 41	1. 33,0	57. 35	37,9	27. 30	42,8	57. 24	47,7	27. 56	52,7	57. 50	57,6
28. 17	33,1	58. 12	1. 38,0	28. 6	42,9	58. 1	47,8	28. 32	52,8	58. 27	57,7
28. 54	33,2	58. 48	38,1	28. 43	1. 43,0	58. 38	47,9	29. 9	52,9	59. 3	57,8
29. 30	33,3	59. 25	38,2	29. 20	43,1	59. 14	1. 48,0	29. 45	1. 53,0	59. 40	57,9
						59. 51	48,1				

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7 0,02

11 0,03

15 0,04

18 0,05

22 0,06

26 0,07

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33 0,09

Продолжение.

1.50 0, 3
2.26 0, 4
3. 3 0, 5

12 ^ч				13 ^ч				14 ^ч			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
"	"	"	"	"	"	"	"	"	"	"	"
0. 17	1. 58,0	30. 11	2. 2,9	0. 6	2. 7,8	30. 0	2. 12,7	0. 32	2. 17,7	30. 26	2. 22,6
0. 53	58,1	30. 48	2. 3,0	0. 42	7,9	30. 37	12,8	1. 8	17,8	31. 3	22,7
1. 30	58,2	31. 24	3,1	1. 19	2. 8,0	31. 14	12,9	1. 45	17,9	31. 39	22,8
2. 6	58,3	32. 1	3,2	1. 56	8,1	31. 50	2. 13,0	2. 21	2. 18,0	32. 16	22,9
2. 43	58,4	32. 38	3,3	2. 32	8,2	32. 27	13,1	2. 58	18,1	32. 53	2. 23,0
3. 20	58,5	33. 14	3,4	3. 9	8,3	33. 3	13,2	3. 35	18,2	33. 29	23,1
3. 56	58,6	33. 51	3,5	3. 46	8,4	33. 40	13,3	4. 11	18,3	34. 6	23,2
4. 33	58,7	34. 28	3,6	4. 22	8,5	34. 17	13,4	4. 48	18,4	34. 43	23,3
5. 10	58,8	35. 4	3,7	4. 59	8,6	34. 53	13,5	5. 25	18,5	35. 19	23,4
5. 46	58,9	35. 41	3,8	5. 35	8,7	35. 30	13,6	6. 1	18,6	35. 56	23,5
6. 23	1. 59,0	36. 17	3,9	6. 12	8,8	36. 7	13,7	6. 38	18,7	36. 32	23,6
6. 59	59,1	36. 54	2. 4,0	6. 49	8,9	36. 43	13,8	7. 14	18,8	37. 9	23,7
7. 36	59,2	37. 31	4,1	7. 25	2. 9,0	37. 20	13,9	7. 51	18,9	37. 46	23,8
8. 13	59,3	38. 7	4,2	8. 2	9,1	37. 56	2. 14,0	8. 28	2. 19,0	38. 22	23,9
8. 49	59,4	38. 44	4,3	8. 39	9,2	38. 33	14,1	9. 4	19,1	38. 59	2. 24,0
9. 26	59,5	39. 21	4,4	9. 15	9,3	39. 10	14,2	9. 41	19,2	39. 36	24,1
10. 3	59,6	39. 57	4,5	9. 51	9,4	39. 46	14,3	10. 18	19,3	40. 12	24,2
10. 39	59,7	40. 34	4,6	10. 28	9,5	40. 23	14,4	10. 54	19,4	40. 49	24,3
11. 16	59,8	41. 10	4,7	11. 5	9,6	41. 0	14,5	11. 31	19,5	41. 25	24,4
11. 52	59,9	41. 47	4,8	11. 42	9,7	41. 36	14,6	12. 7	19,6	42. 2	24,5
12. 29	2. 0,0	42. 24	4,9	12. 18	9,8	42. 13	14,7	12. 44	19,7	42. 39	24,6
13. 6	0,1	43. 0	2. 5,0	12. 55	9,9	42. 49	14,8	13. 21	19,8	43. 15	24,7
13. 12	0,2	43. 37	5,1	13. 32	2. 10,0	43. 26	14,9	13. 57	19,9	43. 52	24,8
14. 19	0,3	44. 14	5,2	14. 8	10,1	44. 3	2. 15,0	14. 34	2. 20,0	44. 28	24,9
14. 56	0,4	44. 50	5,3	14. 45	10,2	44. 39	15,1	15. 11	20,1	45. 5	2. 25,0
15. 32	0,5	45. 27	5,4	15. 21	10,3	45. 16	15,2	15. 47	20,2	45. 42	25,1
16. 9	0,6	46. 3	5,5	15. 58	10,4	45. 53	15,3	16. 24	20,3	46. 18	25,2
16. 45	0,7	46. 40	5,6	16. 35	10,5	46. 29	15,4	17. 0	20,4	46. 55	25,3
17. 22	0,8	47. 17	5,7	17. 11	10,6	47. 6	15,5	17. 37	20,5	47. 32	25,4
17. 59	0,9	47. 53	5,8	17. 48	10,7	47. 42	15,6	18. 14	20,6	48. 8	25,5
18. 35	2. 1,0	48. 30	5,9	18. 25	10,8	48. 19	15,7	18. 50	20,7	48. 45	25,6
19. 12	1,1	49. 7	2. 6,0	19. 1	10,9	48. 56	15,8	19. 27	20,8	49. 22	25,7
19. 49	1,2	49. 43	6,1	19. 38	2. 11,0	49. 32	15,9	20. 4	20,9	49. 58	25,8
20. 25	1,3	50. 20	6,2	20. 14	11,1	50. 9	2. 16,0	20. 40	2. 21,0	50. 35	25,9
21. 2	1,4	50. 56	6,3	20. 51	11,2	50. 46	16,1	21. 17	21,1	51. 11	2. 26,0
21. 38	1,5	51. 33	6,4	21. 28	11,3	51. 22	16,2	21. 53	21,2	51. 48	26,1
22. 15	1,6	52. 10	6,5	22. 4	11,4	51. 59	16,3	22. 30	21,3	52. 25	26,2
22. 52	1,7	52. 46	6,6	22. 41	11,5	52. 35	16,4	23. 7	21,4	53. 1	26,3
23. 28	1,8	53. 23	6,7	23. 18	11,6	53. 12	16,5	23. 43	21,5	53. 38	26,4
24. 5	1,9	54. 0	6,8	23. 54	11,7	53. 49	16,6	24. 20	21,6	54. 15	26,5
24. 42	2. 2,0	54. 36	6,9	24. 31	11,8	54. 25	16,7	24. 57	21,7	54. 51	26,6
25. 18	2,1	55. 13	2. 7,0	25. 7	11,9	55. 2	16,8	25. 33	21,8	55. 28	26,7
25. 55	2,2	55. 49	7,1	25. 44	2. 12,0	55. 39	16,9	26. 10	21,9	56. 4	26,8
26. 32	2,3	56. 26	7,2	26. 21	12,1	56. 15	2. 17,0	26. 46	2. 22,0	56. 41	26,9
27. 8	2,4	57. 3	7,3	26. 57	12,2	56. 52	17,1	27. 23	22,1	57. 18	2. 27,0
27. 45	2,5	57. 39	7,4	27. 34	12,3	57. 28	17,2	28. 0	22,2	57. 54	27,1
28. 21	2,6	58. 16	7,5	28. 10	12,4	58. 5	17,3	28. 36	22,3	58. 31	27,2
28. 58	2,7	58. 53	7,6	28. 47	12,5	58. 42	17,4	29. 13	22,4	59. 8	27,3
29. 35	2,8	59. 29	7,7	29. 24	12,6	59. 18	17,5	29. 50	22,5	59. 44	27,4
						59. 55	17,6				

Продолжение.

15 ^ч				16 ^ч				17 ^ч					
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	"	"
0. 21	2. 27,5	30. 15	2. 32,4	0. 10	2. 37,3	30. 5	2. 42,2	0. 36	2. 47,2	30. 30	2. 52,1	4	0,01
0. 57	27,6	30. 52	32,5	0. 47	37,4	30. 41	42,3	1. 12	47,3	31. 7	52,2	7	0,02
1. 34	27,7	31. 29	32,6	1. 23	37,5	31. 17	42,4	1. 49	47,4	31. 41	52,3	11	0,03
2. 11	27,8	32. 5	32,7	2. 0	37,6	31. 54	42,5	2. 26	47,5	32. 20	52,4	15	0,04
2. 47	27,9	32. 42	32,8	2. 36	37,7	32. 31	42,6	3. 2	47,6	32. 57	52,5	18	0,05
3. 24	2. 28,0	33. 18	32,9	3. 13	37,8	33. 8	42,7	3. 39	47,7	33. 33	52,6	22	0,06
4. 1	28,1	33. 55	2. 33,0	3. 50	37,9	33. 44	42,8	4. 15	47,8	34. 10	52,7	26	0,07
4. 37	28,2	34. 32	33,1	4. 26	2. 38,0	34. 21	42,9	4. 52	47,9	34. 47	52,8	29	0,08
5. 14	28,3	35. 8	33,2	5. 3	38,1	34. 58	2. 43,0	5. 29	2. 48,0	35. 23	52,9	33	0,09
5. 50	28,4	35. 45	33,3	5. 40	38,2	35. 34	43,1	6. 5	48,1	36. 0	2. 53,0		
6. 27	28,5	36. 22	33,4	6. 16	38,3	36. 11	43,2	6. 42	48,2	36. 37	53,1		
7. 4	28,6	36. 58	33,5	6. 53	38,4	36. 47	43,3	7. 19	48,3	37. 13	53,2		
7. 40	28,7	37. 35	33,6	7. 29	38,5	37. 24	43,4	7. 55	48,4	37. 50	53,3		
8. 17	28,8	38. 11	33,7	8. 6	38,6	38. 1	43,5	8. 32	48,5	38. 26	53,4		
8. 53	28,9	38. 48	33,8	8. 43	38,7	38. 37	43,6	9. 8	48,6	39. 3	53,5		
9. 30	2. 29,0	39. 25	33,9	9. 19	38,8	39. 14	43,7	9. 45	48,7	39. 40	53,6		
10. 7	29,1	40. 1	2. 34,0	9. 56	38,9	39. 51	43,8	10. 22	48,8	40. 16	53,7		
10. 43	29,2	40. 38	34,1	10. 33	2. 39,0	40. 27	43,9	10. 58	48,9	40. 53	53,8		
11. 20	29,3	41. 15	34,2	11. 9	39,1	41. 4	2. 44,0	11. 35	2. 49,0	41. 30	53,9		
11. 57	29,4	41. 51	34,3	11. 46	39,2	41. 40	44,1	12. 12	49,1	42. 6	2. 54,0		
12. 33	29,5	42. 28	34,4	12. 22	39,3	42. 17	44,2	12. 48	49,2	42. 43	54,1		
13. 10	29,6	43. 4	34,5	12. 59	39,4	42. 54	44,3	13. 25	49,3	43. 19	54,2		
13. 46	29,7	43. 41	34,6	13. 36	39,5	43. 30	44,4	14. 1	49,4	43. 56	54,3		
14. 23	29,8	44. 18	34,7	14. 12	39,6	44. 7	44,5	14. 38	49,5	44. 33	54,4		
15. 0	29,9	44. 54	34,8	14. 49	39,7	44. 44	44,6	15. 15	49,6	45. 9	54,5		
15. 36	2. 30,0	45. 31	34,9	15. 26	39,8	45. 20	44,7	15. 51	49,7	45. 46	54,6		
16. 13	30,1	46. 8	2. 35,0	16. 2	39,9	45. 57	44,8	16. 28	49,8	46. 23	54,7		
16. 50	30,2	46. 44	35,1	16. 39	2. 40,0	46. 33	44,9	17. 5	49,9	46. 59	54,8		
17. 26	30,3	47. 21	35,2	17. 15	40,1	47. 10	2. 45,0	17. 41	2. 50,0	47. 36	54,9		
18. 3	30,4	47. 58	35,3	17. 52	40,2	47. 47	45,1	18. 18	50,1	48. 12	2. 55,0		
18. 39	30,5	48. 34	35,4	18. 29	40,3	48. 23	45,2	18. 54	50,2	48. 49	55,1		
19. 16	30,6	49. 11	35,5	19. 5	40,4	49. 0	45,3	19. 31	50,3	49. 26	55,2		
19. 53	30,7	49. 47	35,6	19. 42	40,5	49. 36	45,4	20. 8	50,4	50. 2	55,3		
20. 29	30,8	50. 24	35,7	20. 19	40,6	50. 13	45,5	20. 44	50,5	50. 39	55,4		
21. 6	30,9	51. 1	35,8	20. 55	40,7	50. 50	45,6	21. 21	50,6	51. 16	55,5		
21. 43	2. 31,0	51. 37	35,9	21. 32	40,8	51. 26	45,7	21. 58	50,7	51. 52	55,6		
22. 19	31,1	52. 14	2. 36,0	22. 8	40,9	52. 3	45,8	22. 34	50,8	52. 29	55,7		
22. 56	31,2	52. 50	36,1	22. 45	2. 41,0	52. 40	45,9	23. 11	50,9	53. 5	55,8		
23. 32	31,3	53. 27	36,2	23. 22	41,1	53. 16	2. 46,0	23. 47	2. 51,0	53. 42	55,9		
24. 9	31,4	54. 4	36,3	23. 58	41,2	53. 53	46,1	24. 24	51,1	54. 19	2. 56,0		
24. 46	31,5	54. 40	36,4	24. 35	41,3	54. 29	46,2	25. 1	51,2	54. 55	56,1		
25. 22	31,6	55. 17	36,5	25. 12	41,4	55. 6	46,3	25. 37	51,3	55. 32	56,2		
25. 59	31,7	55. 54	36,6	25. 48	41,5	55. 43	46,4	26. 14	51,4	56. 9	56,3		
26. 36	31,8	56. 30	36,7	26. 25	41,6	56. 19	46,5	26. 51	51,5	56. 45	56,4		
27. 12	31,9	57. 7	36,8	27. 1	41,7	56. 56	46,6	27. 27	51,6	57. 22	56,5		
27. 49	2. 32,0	57. 44	36,9	27. 38	41,8	57. 33	46,7	28. 4	51,7	57. 58	56,6		
28. 25	32,1	58. 20	2. 37,0	28. 15	41,9	58. 9	46,8	28. 40	51,8	58. 35	56,7		
29. 2	32,2	58. 57	37,1	28. 51	2. 42,0	58. 46	46,9	29. 17	51,9	59. 12	56,8		
29. 39	32,3	59. 33	37,2	29. 28	42,1	59. 22	2. 47,0	29. 54	2. 52,0	59. 48	56,9		
						59. 59	47,1						

Продолжение.

21°				22°				23°			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "	" "
0. 29	3. 26,5	30. 24	3. 31,4	0. 18	3. 36,3	30. 13	3. 41,2	0. 7	3. 46,1	30. 2	3. 51,0
1. 6	26,6	31. 0	31,5	0. 55	36,4	30. 50	41,3	0. 44	46,2	30. 39	51,1
1. 42	26,7	31. 37	31,6	1. 31	36,5	31. 26	41,4	1. 21	46,3	31. 15	51,2
2. 19	26,8	32. 14	31,7	2. 8	36,6	32. 3	41,5	1. 57	46,4	31. 52	51,3
2. 56	26,9	32. 50	31,8	2. 45	36,7	32. 39	41,6	2. 34	46,5	32. 28	51,4
3. 32	3. 27,0	33. 27	31,9	3. 21	36,8	33. 16	41,7	3. 11	46,6	33. 5	51,5
4. 9	27,1	34. 3	3. 32,0	3. 58	36,9	33. 53	41,8	3. 47	46,7	33. 42	51,6
4. 45	27,2	34. 40	32,1	4. 35	3. 37,0	34. 29	41,9	4. 24	46,8	34. 18	51,7
5. 22	27,3	35. 17	32,2	5. 11	37,1	35. 6	3. 42,0	5. 0	46,9	34. 55	51,8
5. 59	27,4	35. 53	32,3	5. 48	37,2	35. 42	42,1	5. 37	3. 47,0	35. 32	51,9
6. 35	27,5	36. 30	32,4	6. 24	37,3	36. 19	42,2	6. 14	47,1	36. 8	3. 52,0
7. 12	27,6	37. 7	32,5	7. 1	37,4	36. 56	42,3	6. 50	47,2	36. 45	52,1
7. 49	27,7	37. 43	32,6	7. 38	37,5	37. 32	42,4	7. 27	47,3	37. 21	52,2
8. 25	27,8	38. 20	32,7	8. 14	37,6	38. 9	42,5	8. 4	47,4	37. 58	52,3
9. 2	27,9	38. 56	32,8	8. 51	37,7	38. 46	42,6	8. 40	47,5	38. 35	52,4
9. 38	3. 28,0	39. 33	32,9	9. 28	37,8	39. 22	42,7	9. 17	47,6	39. 11	52,5
10. 15	28,1	40. 10	3. 33,0	10. 4	37,9	39. 59	42,8	9. 53	47,7	39. 48	52,6
10. 52	28,2	40. 46	33,1	10. 41	3. 38,0	40. 35	42,9	10. 30	47,8	40. 25	52,7
11. 28	28,3	41. 23	33,2	11. 17	38,1	41. 12	3. 43,0	11. 7	47,9	41. 1	52,8
12. 5	28,4	42. 0	33,3	11. 54	38,2	41. 49	43,1	11. 43	3. 48,0	41. 38	52,9
12. 42	28,5	42. 36	33,4	12. 31	38,3	42. 25	43,2	12. 20	48,1	42. 14	3. 53,0
13. 18	28,6	43. 13	33,5	13. 7	38,4	43. 2	43,3	12. 57	48,2	42. 51	53,1
13. 55	28,7	43. 49	33,6	13. 44	38,5	43. 39	43,4	13. 33	48,3	43. 28	53,2
14. 31	28,8	44. 26	33,7	14. 21	38,6	44. 15	43,5	14. 10	48,4	44. 4	53,3
15. 8	28,9	45. 3	33,8	14. 57	38,7	44. 52	43,6	14. 46	48,5	44. 41	53,4
15. 45	3. 29,0	45. 39	33,9	15. 34	38,8	45. 28	43,7	15. 23	48,6	45. 18	53,5
16. 21	29,1	46. 16	3. 34,0	16. 10	38,9	46. 5	43,8	16. 0	48,7	45. 54	53,6
16. 58	29,2	46. 53	34,1	16. 47	3. 39,0	46. 42	43,9	16. 36	48,8	46. 31	53,7
17. 35	29,3	47. 29	34,2	17. 24	39,1	47. 18	3. 44,0	17. 13	48,9	47. 7	53,8
18. 11	29,4	48. 6	34,3	18. 0	39,2	47. 55	44,1	17. 50	3. 49,0	47. 44	53,9
18. 48	29,5	48. 42	34,4	18. 37	39,3	48. 32	44,2	18. 26	49,1	48. 21	3. 54,0
19. 24	29,6	49. 19	34,5	19. 14	39,4	49. 8	44,3	19. 3	49,2	48. 57	54,1
20. 1	29,7	49. 56	34,6	19. 50	39,5	49. 45	44,4	19. 39	49,3	49. 34	54,2
20. 38	29,8	50. 32	34,7	20. 27	39,6	50. 21	44,5	20. 16	49,4	50. 11	54,3
21. 14	29,9	51. 9	34,8	21. 3	39,7	50. 58	44,6	20. 53	49,5	50. 47	54,4
21. 51	3. 30,0	51. 45	34,9	21. 40	39,8	51. 35	44,7	21. 29	49,6	51. 24	54,5
22. 28	30,1	52. 22	3. 35,0	22. 17	39,9	52. 11	44,8	22. 6	49,7	52. 0	54,6
23. 4	30,2	52. 59	35,1	22. 53	3. 40,0	52. 48	44,9	22. 43	49,8	52. 37	54,7
23. 41	30,3	53. 35	35,2	23. 30	40,1	53. 25	3. 45,0	23. 19	49,9	53. 14	54,8
24. 17	30,4	54. 12	35,3	24. 7	40,2	54. 1	45,1	23. 56	3. 50,0	53. 50	54,9
24. 54	30,5	54. 49	35,4	24. 43	40,3	54. 38	45,2	24. 32	50,1	54. 27	3. 55,0
25. 31	30,6	55. 25	35,5	25. 20	40,4	55. 14	45,3	25. 9	50,2	55. 4	55,1
26. 7	30,7	56. 2	35,6	25. 56	40,5	55. 51	45,4	25. 46	50,3	55. 40	55,2
26. 44	30,8	56. 38	35,7	26. 33	40,6	56. 28	45,5	26. 22	50,4	56. 17	55,3
27. 20	30,9	57. 15	35,8	27. 10	40,7	57. 4	45,6	26. 59	50,5	56. 53	55,4
27. 57	3. 31,0	57. 52	35,9	27. 46	40,8	57. 41	45,7	27. 36	50,6	57. 30	55,5
28. 34	31,1	58. 28	3. 36,0	28. 23	40,9	58. 18	45,8	28. 12	50,7	58. 7	55,6
29. 10	31,2	59. 5	36,1	29. 0	3. 41,0	58. 54	45,9	28. 49	50,8	58. 43	55,7
29. 47	31,3	59. 42	36,2	29. 36	41,1	59. 31	3. 46,0	29. 25	50,9	59. 20	55,8
										59. 57	55,9

" "

4 0,01

7 0,02

11 0,03

15 0,04

18 0,05

22 0,06

26 0,07

29 0,08

33 0,09

Продолжение.

" " "

3. 40 } 0, 06

4. 16 } 0, 07

24 ^ч				25 ^ч			
звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.	звѣз.вр.	поправ.
" "	" "	" "	" "	" "	" "	" "	" "
0. 33	3. 56,0	30. 28	4. 0,9	0. 22	4. 5,8	30. 17	4. 10,7
1. 10	56,1	31. 4	4. 1,0	0. 59	5,9	30. 54	10,8
1. 46	56,2	31. 41	1,1	1. 36	4. 6,0	31. 30	10,9
2. 23	56,3	32. 18	1,2	2. 12	6,1	32. 7	4. 11,0
3. 0	56,4	32. 54	1,3	2. 49	6,2	32. 44	11,1
3. 36	56,5	33. 31	1,4	3. 26	6,3	33. 20	11,2
4. 13	56,6	34. 8	1,5	4. 2	6,4	33. 57	11,3
4. 50	56,7	34. 44	1,6	4. 39	6,5	34. 33	11,4
5. 26	56,8	35. 21	1,7	5. 15	6,6	35. 10	11,5
6. 3	56,9	35. 57	1,8	5. 52	6,7	35. 47	11,6
6. 39	3. 57,0	36. 34	1,9	6. 29	6,8	36. 23	11,7
7. 16	57,1	37. 11	4. 2,0	7. 5	6,9	37. 0	11,8
7. 53	57,2	37. 47	2,1	7. 42	4. 7,0	37. 37	11,9
8. 29	57,3	38. 24	2,2	8. 19	7,1	38. 13	4. 12,0
9. 6	57,4	39. 1	2,3	8. 55	7,2	38. 50	12,1
9. 43	57,5	39. 37	2,4	9. 32	7,3	39. 26	12,2
10. 19	57,6	40. 14	2,5	10. 8	7,4	40. 3	12,3
10. 56	57,7	40. 50	2,6	10. 45	7,5	40. 40	12,4
11. 32	57,8	41. 27	2,7	11. 22	7,6	41. 16	12,5
12. 9	57,9	42. 4	2,8	11. 58	7,7	41. 53	12,6
12. 46	3. 58,0	42. 40	2,9	12. 35	7,8	42. 30	12,7
13. 22	58,1	42. 17	4. 3,0	13. 12	7,9	43. 6	12,8
13. 59	58,2	43. 54	3,1	13. 48	4. 8,0	43. 43	12,9
14. 36	58,3	44. 30	3,2	14. 25	8,1	44. 19	4. 13,0
15. 12	58,4	45. 7	3,3	15. 1	8,2	44. 56	13,1
15. 49	58,5	45. 43	3,4	15. 38	8,3	45. 33	13,2
16. 25	58,6	46. 20	3,5	16. 15	8,4	46. 9	13,3
17. 2	58,7	46. 57	3,6	16. 51	8,5	46. 46	13,4
17. 39	58,8	47. 33	3,7	17. 28	8,6	47. 23	13,5
18. 15	58,9	48. 10	3,8	18. 5	8,7	47. 59	13,6
18. 52	3. 59,0	48. 46	3,9	18. 41	8,8	48. 36	13,7
19. 29	59,1	49. 23	4. 4,0	19. 18	8,9	49. 12	13,8
20. 5	59,2	50. 0	4,1	19. 54	4. 9,0	49. 49	13,9
20. 42	59,3	50. 36	4,2	20. 31	9,1	50. 26	4. 14,0
21. 18	59,4	51. 13	4,3	21. 8	9,2	51. 2	14,1
21. 55	59,5	51. 50	4,4	21. 44	9,3	51. 39	14,2
22. 32	59,6	52. 26	4,5	22. 21	9,4	52. 16	14,3
23. 8	59,7	53. 3	4,6	22. 58	9,5	52. 52	14,4
23. 45	59,8	53. 40	4,7	23. 34	9,6	53. 29	14,5
24. 22	59,9	54. 16	4,8	24. 11	9,7	54. 5	14,6
24. 58	4. 0,0	54. 53	4,9	24. 47	9,8	54. 42	14,7
25. 35	0,1	55. 29	4. 5,0	25. 24	9,9	55. 19	14,8
26. 11	0,2	56. 6	5,1	26. 1	4. 10,0	55. 55	14,9
26. 48	0,3	56. 43	5,2	26. 37	10,1	56. 32	4. 15,0
27. 25	0,4	57. 19	5,3	27. 14	10,2	57. 8	15,1
28. 1	0,5	57. 56	5,4	27. 51	10,3	57. 45	15,2
28. 38	0,6	58. 33	5,5	28. 27	10,4	58. 21	15,3
29. 15	0,7	59. 9	5,6	29. 4	10,5	58. 58	15,4
29. 51	0,8	59. 46	5,7	29. 40	10,6	59. 35	15,5

" "

4 0, 01

7 0, 02

11 0, 03

15 0, 04

18 0, 05

22 0, 06

26 0, 07

29 0, 08

33 0, 09

Для сисканія Поправки Подня и Полуночи опредѣленнаго помощію соотвѣствующихъ высотъ солнца.
1 Часть Аргументовъ—половина промежутка времени между наблюденіями.

часы	0 ^ч		1 ^ч		2 ^ч		3 ^ч		часы
минуш	Log. A	Log. B	Log. A	Log. B	Log. A	Log. B	Log. A	Log. B	минуш
0	7, 7247	7, 7247	7, 7297	7, 7146	7, 7447	7, 6823	7, 7703	7, 6198	0
1	7, 7247	7, 7247	7, 7298	7, 7143	7, 7451	7, 6815	7, 7708	7, 6184	1
2	7, 7247	7, 7247	7, 7300	7, 7139	7, 7454	7, 6807	7, 7713	7, 6170	2
3	7, 7247	7, 7247	7, 7302	7, 7136	7, 7458	7, 6800	7, 7719	7, 6156	3
4	7, 7247	7, 7247	7, 7304	7, 7132	7, 7461	7, 6792	7, 7724	7, 6142	4
5	7, 7247	7, 7246	7, 7305	7, 7128	7, 7464	7, 6784	7, 7729	7, 6127	5
6	7, 7247	7, 7246	7, 7307	7, 7125	7, 7468	7, 6776	7, 7735	7, 6113	6
7	7, 7248	7, 7246	7, 7309	7, 7121	7, 7472	7, 6768	7, 7740	7, 6098	7
8	7, 7248	7, 7245	7, 7311	7, 7117	7, 7475	7, 6759	7, 7745	7, 6083	8
9	7, 7248	7, 7245	7, 7313	7, 7113	7, 7479	7, 6751	7, 7751	7, 6068	9
10	7, 7248	7, 7244	7, 7315	7, 7109	7, 7482	7, 6743	7, 7756	7, 6053	10
11	7, 7249	7, 7244	7, 7317	7, 7105	7, 7486	6, 6734	7, 7762	7, 6038	11
12	7, 7249	7, 7243	7, 7319	7, 7101	7, 7490	6, 6726	7, 7767	7, 6023	12
13	7, 7249	7, 7242	7, 7321	7, 7097	7, 7494	7, 6717	7, 7773	7, 6007	13
14	7, 7250	7, 7242	7, 7323	7, 7092	7, 7497	7, 6708	7, 7779	7, 5991	14
15	7, 7250	7, 7241	7, 7325	7, 7088	7, 7501	7, 6700	7, 7784	7, 5975	15
16	7, 7251	7, 7240	7, 7327	7, 7083	7, 7505	7, 6691	7, 7790	7, 5959	16
17	7, 7251	7, 7239	7, 7329	7, 7079	7, 7509	7, 6682	7, 7796	7, 5943	17
18	7, 7252	7, 7238	7, 7331	7, 7075	7, 7513	7, 6673	7, 7801	7, 5927	18
19	7, 7252	7, 7237	7, 7333	7, 7070	7, 7517	7, 6663	7, 7807	7, 5910	19
20	7, 7253	7, 7236	7, 7336	7, 7065	7, 7521	7, 6654	7, 7813	7, 5894	20
21	7, 7253	7, 7235	7, 7338	7, 7061	7, 7525	7, 6645	7, 7819	7, 5877	21
22	7, 7254	7, 7234	7, 7340	7, 7056	7, 7529	7, 6635	7, 7825	7, 5860	22
23	7, 7254	7, 7232	7, 7342	7, 7051	7, 7533	7, 6626	7, 7831	7, 5843	23
24	7, 7255	7, 7231	7, 7345	7, 7046	7, 7537	7, 6616	7, 7836	7, 5825	24
25	7, 7256	7, 7230	7, 7347	7, 7041	7, 7541	7, 6606	7, 7842	7, 5808	25
26	7, 7256	7, 7228	7, 7349	7, 7036	7, 7545	7, 6597	7, 7848	7, 5790	26
27	7, 7257	7, 7227	7, 7352	7, 7031	7, 7549	7, 6587	7, 7854	7, 5772	27
28	7, 7258	7, 7225	7, 7354	7, 7026	7, 7553	7, 6577	7, 7860	7, 5754	28
29	7, 7259	7, 7224	7, 7357	7, 7021	7, 7557	7, 6567	7, 7867	7, 5736	29
30	7, 7259	7, 7222	7, 7359	7, 7015	7, 7562	7, 6556	7, 7873	7, 5717	30
31	7, 7260	7, 7220	7, 7362	7, 7010	7, 7566	7, 6546	7, 7879	7, 5699	31
32	7, 7261	7, 7219	7, 7364	7, 7005	7, 7570	7, 6536	7, 7885	7, 5680	32
33	7, 7262	7, 7217	7, 7367	7, 6999	7, 7575	7, 6525	7, 7891	7, 5661	33
34	7, 7263	7, 7215	7, 7369	7, 6993	7, 7579	7, 6514	7, 7898	7, 5641	34
35	7, 7264	7, 7213	7, 7372	7, 6988	7, 7583	7, 6504	7, 7904	7, 5622	35
36	7, 7265	7, 7211	7, 7374	7, 6982	7, 7588	7, 6493	7, 7910	7, 5602	36
37	7, 7266	7, 7209	7, 7377	7, 6976	7, 7592	7, 6482	7, 7916	7, 5582	37
38	7, 7267	7, 7207	7, 7380	7, 6970	7, 7597	7, 6471	7, 7923	7, 5562	38
39	7, 7268	7, 7205	7, 7383	7, 6964	7, 7601	7, 6460	7, 7929	7, 5542	39
40	7, 7269	7, 7203	7, 7386	7, 6958	7, 7606	7, 6448	7, 7936	7, 5522	40
41	7, 7270	7, 7200	7, 7388	7, 6952	7, 7610	7, 6437	7, 7942	7, 5501	41
42	7, 7271	7, 7198	7, 7391	7, 6946	7, 7615	7, 6425	7, 7949	7, 5480	42
43	7, 7272	7, 7196	7, 7394	7, 6940	7, 7620	7, 6414	7, 7955	7, 5459	43
44	7, 7274	7, 7193	7, 7397	7, 6934	7, 7624	7, 6402	7, 7962	7, 5437	44
45	7, 7275	7, 7191	7, 7400	7, 6927	7, 7629	7, 6390	7, 7969	7, 5416	45
46	7, 7276	7, 7188	7, 7403	7, 6921	7, 7634	7, 6378	7, 7975	7, 5394	46
47	7, 7277	7, 7186	7, 7406	7, 6914	7, 7638	7, 6366	7, 7982	7, 5372	47
48	7, 7279	7, 7183	7, 7409	7, 6908	7, 7643	7, 6354	7, 7989	7, 5350	48
49	7, 7280	7, 7180	7, 7412	7, 6901	7, 7648	7, 6342	7, 7995	7, 5327	49
50	7, 7281	7, 7177	7, 7415	7, 6894	7, 7653	7, 6329	7, 8002	7, 5304	50
51	7, 7283	7, 7174	7, 7418	7, 6888	7, 7658	7, 6317	7, 8009	7, 5281	51
52	7, 7284	7, 7172	7, 7421	7, 6881	7, 7663	7, 6304	7, 8016	7, 5258	52
53	7, 7286	7, 7169	7, 7424	7, 6874	7, 7668	7, 6291	7, 8023	7, 5234	53
54	7, 7287	7, 7166	7, 7428	7, 6867	7, 7673	7, 6278	7, 8030	7, 5211	54
55	7, 7289	7, 7162	7, 7431	7, 6859	7, 7678	7, 6265	7, 8037	7, 5186	55
56	7, 7290	7, 7159	7, 7434	7, 6852	7, 7683	7, 6252	7, 8044	7, 5162	56
57	7, 7292	7, 7156	7, 7437	7, 6845	7, 7688	7, 6239	7, 8051	7, 5137	57
58	7, 7293	7, 7153	7, 7441	7, 6838	7, 7693	7, 6225	7, 8058	7, 5112	58
59	7, 7295	7, 7150	7, 7444	7, 6830	7, 7698	7, 6212	7, 8065	7, 5087	59
60	7, 7297	7, 7146	7, 7447	7, 6823	7, 7703	7, 6198	7, 8072	7, 5062	60

Продолженіе.

часы	4 ^ч		5 ^ч		6 ^ч		7 ^ч		часы
мину.	Log. A	Log. B	Log. A	Log. B	Log. A	Log. B.	Log. A	Log. B	мину.
0	7, 8072	7, 5062	7, 5067	7, 2697	7, 9208	00	8, 0028	7, 4158 ⁿ	0
1	7, 8079	7, 5036	7, 8576	7, 2635	7, 9220	5, 5618 ⁿ	8, 0044	7, 4214 ⁿ	1
2	7, 8086	7, 5010	7, 8586	7, 2572	7, 9232	5, 8641 ⁿ	8, 0059	7, 4328 ⁿ	2
3	7, 8094	7, 4983	7, 8595	7, 2507	7, 9245	6, 0411 ⁿ	8, 0075	7, 4412 ⁿ	3
4	7, 8101	7, 4957	7, 8605	7, 2442	7, 9257	6, 1675 ⁿ	8, 0090	7, 4494 ⁿ	4
5	7, 8108	7, 4930	7, 8614	7, 2374	7, 9269	6, 2657 ⁿ	8, 0106	7, 4575 ⁿ	5
6	7, 8116	7, 4902	7, 8624	7, 2306	7, 9282	6, 3461 ⁿ	8, 0122	7, 4655 ⁿ	6
7	7, 8123	7, 4874	7, 8634	7, 2236	7, 9294	6, 4142 ⁿ	8, 0138	7, 4735 ⁿ	7
8	7, 8130	7, 4846	7, 8643	7, 2164	7, 9306	6, 4734 ⁿ	8, 0154	7, 4813 ⁿ	8
9	7, 8138	7, 4818	7, 8653	7, 2091	7, 9319	6, 5258 ⁿ	8, 0170	7, 4891 ⁿ	9
10	7, 8145	7, 4789	7, 8663	7, 2016	7, 9331	6, 5728 ⁿ	8, 0186	7, 4967 ⁿ	10
11	7, 8153	7, 4760	7, 8673	7, 1940	7, 9344	6, 6154 ⁿ	8, 0202	7, 5043 ⁿ	11
12	7, 8160	7, 4731	7, 8683	7, 1861	7, 9357	6, 6545 ⁿ	8, 0218	7, 5118 ⁿ	12
13	7, 8168	7, 4701	7, 8693	7, 1781	7, 9369	6, 6905 ⁿ	8, 0234	7, 5192 ⁿ	13
14	7, 8176	7, 4671	7, 8703	7, 1699	7, 9382	6, 7239 ⁿ	8, 0251	7, 5265 ⁿ	14
15	7, 8183	7, 4640	7, 8713	7, 1615	7, 9395	6, 7551 ⁿ	8, 0267	7, 5338 ⁿ	15
16	7, 8191	7, 4609	7, 8723	7, 1529	7, 9408	6, 7841 ⁿ	8, 0283	7, 5410 ⁿ	16
17	7, 8199	7, 4578	7, 8733	7, 1440	7, 9421	6, 8119 ⁿ	8, 0300	7, 5481 ⁿ	17
18	7, 8206	7, 4546	7, 8743	7, 1349	7, 9434	6, 8380 ⁿ	8, 0316	7, 5551 ⁿ	18
19	7, 8214	7, 4514	7, 8753	7, 1256	7, 9447	6, 8627 ⁿ	8, 0333	7, 5621 ⁿ	19
20	7, 8222	7, 4482	7, 8763	7, 1160	7, 9460	6, 8863 ⁿ	8, 0350	7, 5690 ⁿ	20
21	7, 8230	7, 4449	7, 8773	7, 1061	7, 9473	6, 9087 ⁿ	8, 0367	7, 5759 ⁿ	21
22	7, 8238	7, 4415	7, 8784	7, 0960	7, 9486	6, 9302 ⁿ	8, 0384	7, 5827 ⁿ	22
23	7, 8246	7, 4381	7, 8794	7, 0855	7, 9499	6, 9507 ⁿ	8, 0401	7, 5894 ⁿ	23
24	7, 8254	7, 4347	7, 8804	7, 0748	7, 9512	6, 9705 ⁿ	8, 0418	7, 5961 ⁿ	24
25	7, 8262	7, 4312	7, 8815	7, 0637	7, 9526	6, 9895 ⁿ	8, 0435	7, 6027 ⁿ	25
26	7, 8270	7, 4277	7, 8825	7, 0522	7, 9539	7, 0078 ⁿ	8, 0452	7, 6093 ⁿ	26
27	7, 8278	7, 4241	7, 8836	7, 0404	7, 9553	7, 0254 ⁿ	8, 0469	7, 6158 ⁿ	27
28	7, 8286	7, 4205	7, 8846	7, 0282	7, 9566	7, 0425 ⁿ	8, 0486	7, 6222 ⁿ	28
29	7, 8294	7, 4168	7, 8857	7, 0156	7, 9580	7, 0590 ⁿ	8, 0504	7, 6286 ⁿ	29
30	7, 8302	7, 4131	7, 8868	7, 0025	7, 9593	7, 0750 ⁿ	8, 0521	7, 6350 ⁿ	30
31	7, 8311	7, 4093	7, 8878	6, 9889	7, 9607	7, 0905 ⁿ	8, 0539	7, 6413 ⁿ	31
32	7, 8319	7, 4055	7, 8889	6, 9748	7, 9621	7, 1056 ⁿ	8, 0556	7, 6475 ⁿ	32
33	7, 8328	7, 4016	7, 8900	6, 9602	7, 9634	7, 1203 ⁿ	8, 0574	7, 6537 ⁿ	33
34	7, 8336	7, 3977	7, 8911	6, 9449	7, 9648	7, 1345 ⁿ	8, 0592	7, 6599 ⁿ	34
35	7, 8344	7, 3937	7, 8922	6, 9290	7, 9662	7, 1484 ⁿ	8, 0610	7, 6660 ⁿ	35
36	7, 8353	7, 3876	7, 8932	6, 9125	7, 9676	7, 1619 ⁿ	8, 0628	7, 6721 ⁿ	36
37	7, 8361	7, 3855	7, 8943	6, 8953	7, 9690	7, 1751 ⁿ	8, 0646	7, 6781 ⁿ	37
38	7, 8370	7, 3813	7, 8954	6, 8770	7, 9704	7, 1880 ⁿ	8, 0664	7, 6841 ⁿ	38
39	7, 8378	7, 3771	7, 8965	6, 8580	7, 9718	7, 2006 ⁿ	8, 0682	7, 6900 ⁿ	39
40	7, 8387	7, 3728	7, 8977	6, 8379	7, 9732	7, 2129 ⁿ	8, 0700	7, 6960 ⁿ	40
41	7, 8396	7, 3684	7, 8988	6, 8168	7, 9747	7, 2249 ⁿ	8, 0718	7, 7018 ⁿ	41
42	7, 8404	7, 3639	7, 8999	6, 7945	7, 9761	7, 2367 ⁿ	8, 0737	7, 7077 ⁿ	42
43	7, 8413	7, 3594	7, 9010	6, 7709	7, 9775	7, 2483 ⁿ	8, 0755	7, 7135 ⁿ	43
44	7, 8422	7, 3548	7, 9021	6, 7457	7, 9790	7, 2596 ⁿ	8, 0774	7, 7192 ⁿ	44
45	7, 8430	7, 3501	7, 9033	6, 7189	7, 9804	7, 2706 ⁿ	8, 0792	7, 7250 ⁿ	45
46	7, 8439	7, 3454	7, 9044	6, 6901	7, 9819	7, 2815 ⁿ	8, 0811	7, 7306 ⁿ	46
47	7, 8448	7, 3406	7, 9055	6, 6591	7, 9833	7, 2922 ⁿ	8, 0830	7, 7363 ⁿ	47
48	7, 8457	7, 3357	7, 9067	6, 6255	7, 9848	7, 3027 ⁿ	8, 0849	7, 7419 ⁿ	48
49	7, 8466	7, 3307	7, 9078	6, 5889	7, 9862	7, 3129 ⁿ	8, 0868	7, 7475 ⁿ	49
50	7, 8475	7, 3256	7, 9090	6, 5487	7, 9877	7, 3231 ⁿ	8, 0887	7, 7531 ⁿ	50
51	7, 8484	7, 3205	7, 9102	6, 5041	7, 9892	7, 3330 ⁿ	8, 0906	7, 7586 ⁿ	51
52	7, 8493	7, 3152	7, 9113	6, 4541	7, 9907	7, 3428 ⁿ	8, 0925	7, 7641 ⁿ	52
53	7, 8502	7, 3099	7, 9125	6, 3973	7, 9922	7, 3524 ⁿ	8, 0945	7, 7696 ⁿ	53
54	7, 8511	7, 3045	7, 9137	6, 3316	7, 9937	7, 3619 ⁿ	8, 0964	7, 7751 ⁿ	54
55	7, 8520	7, 2989	7, 9148	6, 2536	7, 9952	7, 3712 ⁿ	8, 0983	7, 7805 ⁿ	55
56	7, 8530	7, 2933	7, 9160	6, 1579	7, 9967	7, 3804 ⁿ	8, 1003	7, 7859 ⁿ	56
57	7, 8539	7, 2876	7, 9172	6, 0341	7, 9982	7, 3894 ⁿ	8, 1023	7, 7912 ⁿ	57
58	7, 9548	7, 2817	7, 9184	5, 8593	7, 9998	7, 3984 ⁿ	8, 1043	7, 7966 ⁿ	58
59	7, 8558	7, 2758	7, 9196	5, 5594	8, 0013	7, 4071 ⁿ	8, 1062	7, 8019 ⁿ	59
60	7, 8567	7, 2697	7, 9208	B = O	8, 0028	7, 4158 ⁿ	8, 1082	7, 8072 ⁿ	60

Продолженіе.

Часы	8 ^ч .		9 ^ч .		10 ^ч .		11 ^ч .		Часы
минуш	Log. A.	Log. B.	Log. A.	Log. B.	Log. A.	Log. B.	Log. A.	Log. B.	минуш
0	8, 1082	7, 8072 ⁿ	8, 2474	8, 0969 ⁿ	8, 4437	8, 3812 ⁿ	8, 7711	8, 7560 ⁿ	0
1	8, 1102	7, 8125 ⁿ	8, 2501	8, 1015 ⁿ	8, 4477	8, 3863 ⁿ	8, 7789	8, 7643 ⁿ	1
2	8, 1122	7, 8177 ⁿ	8, 2529	8, 1061 ⁿ	8, 4518	8, 3915 ⁿ	8, 7868	8, 7727 ⁿ	2
3	8, 1143	7, 8229 ⁿ	8, 2556	8, 1107 ⁿ	8, 4559	8, 3966 ⁿ	8, 7948	8, 7813 ⁿ	3
4	8, 1163	7, 8281 ⁿ	8, 2583	8, 1153 ⁿ	8, 4600	8, 4018 ⁿ	8, 8030	8, 7899 ⁿ	4
5	8, 1183	7, 8333 ⁿ	8, 2611	8, 1199 ⁿ	8, 4641	8, 4070 ⁿ	8, 8113	8, 7987 ⁿ	5
6	8, 1204	7, 8385 ⁿ	8, 2639	8, 1245 ⁿ	8, 4683	8, 4122 ⁿ	8, 8198	8, 8076 ⁿ	6
7	8, 1225	7, 8436 ⁿ	8, 2667	8, 1291 ⁿ	8, 4726	8, 4175 ⁿ	8, 8284	8, 8167 ⁿ	7
8	8, 1245	7, 8487 ⁿ	8, 2695	8, 1336 ⁿ	8, 4768	8, 4227 ⁿ	8, 8372	8, 8259 ⁿ	8
9	8, 1266	7, 8538 ⁿ	8, 2724	8, 1382 ⁿ	8, 4811	8, 4280 ⁿ	8, 8461	8, 8353 ⁿ	9
10	8, 1287	7, 8589 ⁿ	8, 2752	8, 1428 ⁿ	8, 4854	8, 4334 ⁿ	8, 8553	8, 8448 ⁿ	10
11	8, 1308	7, 8640 ⁿ	8, 2781	8, 1474 ⁿ	8, 4898	8, 4387 ⁿ	8, 8645	8, 8545 ⁿ	11
12	8, 1329	7, 8690 ⁿ	8, 2809	8, 1520 ⁿ	8, 4942	8, 4441 ⁿ	8, 8740	8, 8644 ⁿ	12
13	8, 1350	7, 8740 ⁿ	8, 2838	8, 1566 ⁿ	8, 4987	8, 4495 ⁿ	8, 8837	8, 8745 ⁿ	13
14	8, 1371	7, 8790 ⁿ	8, 2868	8, 1612 ⁿ	8, 5032	8, 4550 ⁿ	8, 8935	8, 8847 ⁿ	14
15	8, 1393	7, 8840 ⁿ	8, 2897	8, 1658 ⁿ	8, 5077	8, 4604 ⁿ	8, 9036	8, 8952 ⁿ	15
16	8, 1414	7, 8890 ⁿ	8, 2927	8, 1704 ⁿ	8, 5123	8, 4659 ⁿ	8, 9139	8, 9058 ⁿ	16
17	8, 1436	7, 8939 ⁿ	8, 2956	8, 1750 ⁿ	8, 5169	8, 4715 ⁿ	8, 9244	8, 9167 ⁿ	17
18	8, 1458	7, 8989 ⁿ	8, 2986	8, 1797 ⁿ	8, 5215	8, 4770 ⁿ	8, 9351	8, 9278 ⁿ	18
19	8, 1479	7, 9038 ⁿ	8, 3016	8, 1843 ⁿ	8, 5262	8, 4826 ⁿ	8, 9461	8, 9391 ⁿ	19
20	8, 1501	7, 9087 ⁿ	8, 3046	8, 1889 ⁿ	8, 5310	8, 4882 ⁿ	8, 9574	8, 9507 ⁿ	20
21	8, 1523	7, 9136 ⁿ	8, 3077	8, 1935 ⁿ	8, 5358	8, 4939 ⁿ	8, 9689	8, 9625 ⁿ	21
22	8, 1545	7, 9185 ⁿ	8, 3107	8, 1982 ⁿ	8, 5406	8, 4996 ⁿ	8, 9807	8, 9747 ⁿ	22
23	8, 1568	7, 9234 ⁿ	8, 3138	8, 2028 ⁿ	8, 5455	8, 5053 ⁿ	8, 9928	8, 9871 ⁿ	23
24	8, 1590	7, 9282 ⁿ	8, 3169	8, 2074 ⁿ	8, 5504	8, 5111 ⁿ	9, 0052	8, 9999 ⁿ	24
25	8, 1612	7, 9331 ⁿ	8, 3200	8, 2121 ⁿ	8, 5554	8, 5169 ⁿ	9, 0180	9, 0129 ⁿ	25
26	8, 1635	7, 9379 ⁿ	8, 3232	8, 2167 ⁿ	8, 5604	8, 5228 ⁿ	9, 0311	9, 0263 ⁿ	26
27	8, 1658	7, 9427 ⁿ	8, 3263	8, 2214 ⁿ	8, 5655	8, 5287 ⁿ	9, 0447	9, 0401 ⁿ	27
28	8, 1680	7, 9475 ⁿ	8, 3295	8, 2261 ⁿ	8, 5706	8, 5346 ⁿ	9, 0586	9, 0543 ⁿ	28
29	8, 1703	7, 9523 ⁿ	8, 3327	8, 2307 ⁿ	8, 5758	8, 5406 ⁿ	9, 0729	9, 0689 ⁿ	29
30	8, 1726	7, 9571 ⁿ	8, 3359	8, 2354 ⁿ	8, 5810	8, 5466 ⁿ	9, 0877	9, 0839 ⁿ	30
31	8, 1749	7, 9618 ⁿ	8, 3392	8, 2401 ⁿ	8, 5863	8, 5527 ⁿ	9, 1029	9, 0995 ⁿ	31
32	8, 1773	7, 9666 ⁿ	8, 3425	8, 2448 ⁿ	8, 5917	8, 5588 ⁿ	9, 1187	9, 1155 ⁿ	32
33	8, 1796	7, 9714 ⁿ	8, 3457	8, 2495 ⁿ	8, 5971	8, 5650 ⁿ	9, 1351	9, 1321 ⁿ	33
34	8, 1819	7, 9761 ⁿ	8, 3490	8, 2542 ⁿ	8, 6025	8, 5712 ⁿ	9, 1520	9, 1492 ⁿ	34
35	8, 1843	7, 9808 ⁿ	8, 3524	8, 2589 ⁿ	8, 6081	8, 5775 ⁿ	9, 1696	9, 1670 ⁿ	35
36	8, 1867	7, 9855 ⁿ	8, 3557	8, 2637 ⁿ	8, 6136	8, 5838 ⁿ	9, 1879	9, 1855 ⁿ	36
37	8, 1891	7, 9903 ⁿ	8, 3591	8, 2684 ⁿ	8, 6193	8, 5902 ⁿ	9, 2069	9, 2047 ⁿ	37
38	8, 1914	7, 9950 ⁿ	8, 3625	8, 2732 ⁿ	8, 6250	8, 5966 ⁿ	9, 2268	9, 2248 ⁿ	38
39	8, 1939	7, 9996 ⁿ	8, 3659	8, 2779 ⁿ	8, 6308	8, 6031 ⁿ	9, 2476	9, 2457 ⁿ	39
40	8, 1963	8, 0043 ⁿ	8, 3694	8, 2827 ⁿ	8, 6366	8, 6096 ⁿ	9, 2693	9, 2677 ⁿ	40
41	8, 1987	8, 0090 ⁿ	8, 3728	8, 2875 ⁿ	8, 6426	8, 6162 ⁿ	9, 2922	9, 2907 ⁿ	41
42	8, 2011	8, 0137 ⁿ	8, 3763	8, 2923 ⁿ	8, 6486	8, 6229 ⁿ	9, 3162	9, 3149 ⁿ	42
43	8, 2036	8, 0184 ⁿ	8, 3798	8, 2971 ⁿ	8, 6546	8, 6296 ⁿ	9, 3416	9, 3404 ⁿ	43
44	8, 2061	8, 0230 ⁿ	8, 3834	8, 3019 ⁿ	8, 6608	8, 6364 ⁿ	9, 3685	9, 3675 ⁿ	44
45	8, 2086	8, 0277 ⁿ	8, 3869	8, 3068 ⁿ	8, 6670	8, 6433 ⁿ	9, 3971	9, 3962 ⁿ	45
46	8, 2111	8, 0323 ⁿ	8, 3905	8, 3116 ⁿ	8, 6733	8, 6502 ⁿ	9, 4277	9, 4268 ⁿ	46
47	8, 2136	8, 0370 ⁿ	8, 3941	8, 3165 ⁿ	8, 6797	8, 6572 ⁿ	9, 4604	9, 4597 ⁿ	47
48	8, 2161	8, 0416 ⁿ	8, 3978	8, 3214 ⁿ	8, 6861	8, 6643 ⁿ	9, 4958	9, 4952 ⁿ	48
49	8, 2186	8, 0462 ⁿ	8, 4015	8, 3263 ⁿ	8, 6927	8, 6715 ⁿ	9, 5341	9, 5336 ⁿ	49
50	8, 2212	8, 0509 ⁿ	8, 4052	8, 3312 ⁿ	8, 6993	8, 6787 ⁿ	9, 5761	9, 5757 ⁿ	50
51	8, 2237	8, 0555 ⁿ	8, 4089	8, 3361 ⁿ	8, 7060	8, 6860 ⁿ	9, 6224	9, 6221 ⁿ	51
52	8, 2263	8, 0601 ⁿ	8, 4126	8, 3411 ⁿ	8, 7128	8, 6934 ⁿ	9, 6742	9, 6739 ⁿ	52
53	8, 2289	8, 0647 ⁿ	8, 4164	8, 3460 ⁿ	8, 7197	8, 7009 ⁿ	9, 7328	9, 7326 ⁿ	53
54	8, 2315	8, 0693 ⁿ	8, 4202	8, 3510 ⁿ	8, 7268	8, 7085 ⁿ	9, 8003	9, 8002 ⁿ	54
55	8, 2341	8, 0739 ⁿ	8, 4241	8, 3560 ⁿ	8, 7339	8, 7162 ⁿ	9, 8801	9, 8800 ⁿ	55
56	8, 2368	8, 0785 ⁿ	8, 4279	8, 3610 ⁿ	8, 7411	8, 7239 ⁿ	9, 9776	9, 9775 ⁿ	56
57	8, 2394	8, 0831 ⁿ	8, 4318	8, 3660 ⁿ	8, 7484	8, 7318 ⁿ	0, 1031	0, 1031 ⁿ	57
58	8, 2421	8, 0877 ⁿ	8, 4358	8, 3711 ⁿ	8, 7558	8, 7398 ⁿ	0, 2798	0, 2798 ⁿ	58
59	8, 2447	8, 0923 ⁿ	8, 4397	8, 3761 ⁿ	8, 7634	8, 7478 ⁿ	0, 5814	0, 5814 ⁿ	59
60	8, 2474	8, 0969 ⁿ	8, 4437	8, 3812 ⁿ	8, 7711	8, 7560 ⁿ	00	00	60

Для сысканія Поправки Подня и Полуночи, часнь 2, Аргументъ = число.

Числа.	Мѣсяцъ Январь.			Мѣсяцъ Февраль.			Мѣсяцъ Мартъ.			Мѣсяцъ Апрель.		
	Log. a.	Разн.	Log. b.	Log. a.	Разн.	Log. b.	Log. a.	Разн.	Log. b.	Log. a.	Разн.	Log. b.
1	2,767.2n	+39.0	2,395.7n	3,310.2n	+7.5	2,799.8n	3,436.3n	+2.0	2,565.4n	3,443.7n	—	2,334.4
2	2,806.2n	+35.5	2,432.9n	3,317.7n	7.2	2,799.6n	3,438.3n	+1.9	2,545.1n	3,442.1n	—	2,369.1
3	2,841.7n	+32.8	2,466.5n	3,324.9n	7.0	2,798.8n	3,440.2n	+1.8	2,523.4n	3,440.4n	—	2,400.7
4	2,871.5n	+30.3	2,497.2n	3,331.9n	6.6	2,797.5n	3,442.0n	+1.6	2,500.1n	3,438.6n	—	2,429.8
5	2,901.8n	+28.0	2,525.2n	3,338.5n	6.4	2,795.6n	3,443.6n	+1.4	2,475.0n	3,436.7n	—	2,456.6
6	2,932.8n	+26.2	2,550.8n	3,344.9n	6.2	2,793.2n	3,445.0n	+1.4	2,448.0n	3,434.6n	—	2,481.5
7	2,959.0n	+21.5	2,574.3n	3,351.1n	5.9	2,790.3n	3,446.4n	+1.3	2,418.9n	3,432.5n	—	2,504.6
8	2,983.5n	+22.9	2,595.9n	3,357.0n	5.7	2,786.8n	3,447.7n	+1.1	2,387.3n	3,430.2n	—	2,526.1
9	3,006.4n	+21.6	2,615.9n	3,362.7n	5.4	2,782.8n	3,448.8n	+1.0	2,352.8n	3,427.8n	—	2,546.1
10	3,028.0n	+20.4	2,631.4n	3,368.1n	5.3	2,778.2n	3,449.8n	+9	2,315.0n	3,425.3n	—	2,564.9
11	3,048.1n	+19.3	2,651.4n	3,373.4n	5.0	2,773.1n	3,450.7n	+8	2,273.2n	3,422.7n	—	2,582.5
12	3,067.7n	+18.3	2,667.3n	3,378.4n	4.9	2,767.4n	3,451.5n	+7	2,226.5n	3,420.0n	—	2,599.0
13	3,086.0n	+17.3	2,681.8n	3,383.3n	4.6	2,761.2n	3,452.2n	+6	2,173.8n	3,417.1n	—	2,614.4
14	3,103.3n	+16.5	2,695.3n	3,387.9n	4.4	2,754.3n	3,452.8n	+4	2,113.5n	3,414.1n	—	2,628.9
15	3,119.8n	+15.6	2,707.8n	3,392.3n	4.3	2,746.9n	3,453.2n	+4	2,043.1n	3,411.0n	—	2,642.5
16	3,135.4n	+15.0	2,719.2n	3,396.6n	4.0	2,738.9n	3,453.6n	+2	1,958.7n	3,407.7n	—	2,655.3
17	3,150.4n	+14.2	2,729.8n	3,400.6n	3.9	2,730.2n	3,453.8n	+1	1,853.6n	3,404.3n	—	2,667.2
18	3,164.6n	+13.5	2,739.4n	3,401.5n	3.7	2,720.9n	3,453.9n	+0	1,714.2n	3,400.7n	—	2,678.5
19	3,178.1n	+13.1	2,748.2n	3,408.2n	3.6	2,710.9n	3,453.9n	+1	1,507.5n	3,397.0n	—	2,688.9
20	3,191.2n	+12.4	2,756.3n	3,411.8n	3.3	2,700.2n	3,453.8n	+2	1,099.1n	3,393.2n	—	2,698.8
21	3,203.6n	+11.9	2,763.6n	3,415.1n	3.2	2,688.7n	3,453.6n	+3	0,846.9	3,389.2n	—	2,707.9
22	3,215.5n	+11.3	2,770.1n	3,418.3n	3.0	2,676.5n	3,453.3n	+4	1,424.6	3,385.0n	—	2,716.4
23	3,226.8n	+10.9	2,775.9n	3,421.3n	2.9	2,663.5n	3,452.9n	+6	1,603.5	3,380.7n	—	2,724.4
24	3,237.7n	+10.1	2,781.0n	3,424.2n	2.8	2,649.6n	3,452.3n	+7	1,816.3	3,376.2n	—	2,731.7
25	3,248.1n	+10.0	2,785.5n	3,427.0n	2.5	2,634.9n	3,451.6n	+8	1,928.5	3,371.5n	—	2,738.4
26	3,258.1n	+9.6	2,789.3n	3,429.5n	2.4	2,619.1n	3,450.8n	+9	2,017.3	3,366.6n	—	2,744.6
27	3,267.7n	+9.2	2,792.6n	3,431.9n	2.3	2,602.3n	3,449.9n	+1.0	2,090.4	3,361.6n	—	2,750.2
28	3,276.9n	+8.9	2,795.2n	3,434.2n	2.0	2,584.6n	3,448.9n	+1.1	2,152.5	3,356.4n	—	2,755.3
29	3,285.8n	+8.5	2,797.2n	3,436.5n	1.5	2,571.8n	3,447.8n	+1.3	2,206.4	3,351.0n	—	2,759.9
30	3,294.3n	+8.1	2,798.7n	3,438.8n	3	2,559.1n	3,446.5n	+1.3	2,253.9	3,345.4n	—	2,763.9
31	3,302.4n	+7.8	2,799.5n	3,441.1n	3	2,546.4n	3,445.2n	+1.5	2,296.4	3,338.1n	—	2,767.4

Мѣсяцъ Май.			Мѣсяцъ Июнь.			Мѣсяцъ Июль.			Мѣсяцъ Августъ.				
Числа.	Разн.	Log. b.	Разн.	Log. a.	Log. b.	Разн.	Log. a.	Log. b.	Разн.	Log. a.	Разн.	Log. b.	Разн.
1	6.0	2,767.5	3.0	2,997.3 ⁿ	2,601.2	-	2,668.7	2,299.7 ⁿ	+41.5	3,255.6	8.1	2,770.5 ⁿ	+1.9
2	6.2	2,770.5	2.6	2,976.0 ⁿ	2,586.5	-	2,711.6	2,341.2 ⁿ	+37.5	3,264.0	8.2	2,772.4 ⁿ	+1.4
3	6.5	2,773.1	2.1	2,954.8 ⁿ	2,567.4	-	2,750.7	2,378.7 ⁿ	+33.9	3,272.2	7.8	2,773.8 ⁿ	9
4	6.6	2,775.2	1.5	2,931.7 ⁿ	2,546.9	-	2,786.3	2,412.6 ⁿ	+30.7	3,280.0	7.6	2,774.7 ⁿ	4
5	6.9	2,776.7	1.1	2,907.0 ⁿ	2,524.8	-	2,818.9	2,443.3 ⁿ	+28.3	3,287.6	7.3	2,775.1 ⁿ	1
6	7.1	2,777.8	7	2,880.7 ⁿ	2,500.8	-	2,849.2	2,471.6 ⁿ	+26.0	3,294.9	7.1	2,775.0 ⁿ	5
7	7.4	2,778.5	1	2,852.5 ⁿ	2,471.8	-	2,877.1	2,497.6 ⁿ	+24.0	3,302.0	6.8	2,774.5 ⁿ	1.0
8	7.7	2,778.6	4	2,822.3 ⁿ	2,446.6	-	2,903.6	2,521.6 ⁿ	+22.1	3,308.8	6.6	2,773.5 ⁿ	1.5
9	7.9	2,778.2	9	2,789.7 ⁿ	2,415.8	-	2,928.2	2,543.7 ⁿ	+20.5	3,315.4	6.4	2,772.0 ⁿ	2.0
10	8.2	2,777.3	1.3	2,751.1 ⁿ	2,382.0	-	2,951.3	2,564.2 ⁿ	+19.0	3,321.8	6.2	2,770.0 ⁿ	2.1
11	8.4	2,776.0	1.9	2,715.3 ⁿ	2,344.8	-	2,973.1	2,583.2 ⁿ	+17.7	3,328.0	5.9	2,767.6 ⁿ	3.0
12	8.4	2,774.1	2.3	2,672.6 ⁿ	2,303.5	-	2,993.7	2,600.9 ⁿ	+16.4	3,333.9	5.8	2,764.6 ⁿ	3.4
13	8.8	2,771.8	2.9	2,624.8 ⁿ	2,257.0	-	3,013.1	2,617.3 ⁿ	+15.3	3,339.7	5.6	2,761.2 ⁿ	3.9
14	9.1	2,768.9	3.4	2,571.0 ⁿ	2,204.4	-	3,031.7	2,632.6 ⁿ	+14.2	3,345.3	5.3	2,757.3 ⁿ	4.5
15	9.4	2,765.5	4.0	2,509.5 ⁿ	2,143.9	-	3,049.3	2,646.8 ⁿ	+13.2	3,350.6	5.2	2,752.8 ⁿ	4.9
16	9.8	2,761.5	4.5	2,437.8 ⁿ	2,073.0	-	3,066.0	2,660.0 ⁿ	+12.3	3,355.8	4.9	2,747.9 ⁿ	5.6
17	10.2	2,757.0	5.2	2,351.4 ⁿ	1,987.4	-	3,082.0	2,672.3 ⁿ	+11.5	3,360.7	4.9	2,742.3 ⁿ	5.8
18	10.5	2,751.8	5.7	2,243.0 ⁿ	1,879.6	-	3,097.2	2,683.8 ⁿ	+10.5	3,365.6	4.6	2,736.5 ⁿ	6.6
19	11.0	2,746.1	6.3	2,098.6 ⁿ	1,735.6	-	3,111.8	2,694.3 ⁿ	+9.8	3,370.2	4.5	2,729.9 ⁿ	7.1
20	11.4	2,739.8	7.1	1,880.8 ⁿ	1,518.1	-	3,125.7	2,704.1 ⁿ	+9.0	3,374.7	4.3	2,722.8 ⁿ	7.6
21	11.9	2,732.7	7.5	1,420.0 ⁿ	1,057.4	-	3,139.1	2,713.1 ⁿ	+8.3	3,379.0	4.1	2,715.2 ⁿ	8.2
22	12.3	2,725.2	8.3	1,307.4	0,944.8 ⁿ	+554.7	3,151.9	2,721.4 ⁿ	+7.7	3,383.1	4.0	2,707.0 ⁿ	8.9
23	12.8	2,716.9	9.1	1,862.1	1,499.4 ⁿ	+225.7	3,164.2	2,729.1 ⁿ	+6.9	3,387.1	3.8	2,698.1 ⁿ	9.5
24	13.5	2,707.8	9.8	2,087.8	1,724.8 ⁿ	+147.5	3,176.0	2,736.0 ⁿ	+6.3	3,390.9	3.7	2,688.6 ⁿ	10.1
25	14.0	2,707.8	10.7	2,235.3	1,871.9 ⁿ	+109.7	3,187.3	2,742.3 ⁿ	+5.8	3,394.6	3.5	2,678.5 ⁿ	10.9
26	14.7	2,698.0	11.4	2,345.0	1,981.0 ⁿ	+87.3	3,198.2	2,748.1 ⁿ	+5.1	3,398.1	3.4	2,667.6 ⁿ	11.5
27	15.3	2,675.9	12.3	2,432.3	2,067.7 ⁿ	+72.6	3,208.7	2,753.2 ⁿ	+4.5	3,401.5	3.3	2,656.1 ⁿ	12.3
28	16.0	2,663.6	13.3	2,504.9	2,139.3 ⁿ	+62.0	3,218.8	2,757.7 ⁿ	+4.0	3,404.8	3.1	2,643.8 ⁿ	13.1
29	16.9	2,650.3	14.2	2,566.9	2,200.4 ⁿ	+54.0	3,228.5	2,761.7 ⁿ	+9.1	3,407.9	3.0	2,630.7 ⁿ	13.9
30	17.6	2,636.1	15.1	2,620.9	2,253.2 ⁿ	+47.8	3,237.9	2,765.2 ⁿ	+9.1	3,410.9	2.9	2,616.8 ⁿ	14.9
31	18.6	2,620.7	16.5				3,247.0	2,768.1 ⁿ	+8.6	3,413.8	2.8	2,601.9 ⁿ	15.8

Продолженіе.

Мѣсяцъ Сентябрь.			Мѣсяцъ Октябрь.			Мѣсяцъ Ноябрь.			Мѣсяцъ Декабрь.		
Числа.	Log. a.	Разн.	Log. b.	Разн.	Log. a.	Log. b.	Разн.	Log. a.	Разн.	Log. b.	Разн.
1	3,416.6	2.6	2,586.1n	16.8	3,447.0	2,177.3	+51.0	3,365.1	5.3	2,773.3	4.7
2	3,419.2	2.5	2,569.3n	18.0	3,446.4	2,228.3	+45.5	3,359.8	5.6	2,778.0	4.2
3	3,421.7	2.4	2,551.3n	19.1	3,445.6	2,273.8	+40.8	3,354.2	5.7	2,782.2	3.6
4	3,424.1	2.3	2,532.2n	20.5	3,444.7	2,314.6	+37.1	3,348.5	6.0	2,785.8	3.1
5	3,426.4	2.2	2,511.7n	22.0	3,443.7	2,351.7	+33.8	3,342.5	6.2	2,788.9	2.6
6	3,428.6	2.0	2,489.7n	23.6	3,442.6	2,385.5	+31.1	3,336.3	6.5	2,791.5	2.0
7	3,430.6	2.0	2,466.1n	25.4	3,441.4	2,416.6	+28.6	3,329.8	6.7	2,793.5	1.5
8	3,432.6	1.8	2,440.7n	27.5	3,440.1	2,445.2	+26.7	3,323.1	7.0	2,795.0	1.0
9	3,434.4	1.8	2,413.2n	29.6	3,438.6	2,471.9	+24.6	3,316.1	7.3	2,796.0	5
10	3,436.2	1.6	2,383.6n	32.5	3,437.0	2,496.5	+23.0	3,308.8	7.7	2,796.5	1
11	3,437.8	1.5	2,351.1n	35.5	3,435.4	2,519.5	+21.5	3,301.1	7.9	2,796.4	7
12	3,439.3	1.4	2,315.6n	39.2	3,433.5	2,541.0	+20.1	3,293.2	8.2	2,795.7	1.2
13	3,440.7	1.3	2,276.4n	43.6	3,431.6	2,561.1	+18.8	3,285.0	8.6	2,794.5	1.7
14	3,442.0	1.2	2,232.8n	48.9	3,429.5	2,579.9	+17.7	3,276.4	9.0	2,792.8	2.4
15	3,443.2	1.0	2,183.9n	53.8	3,427.3	2,597.6	+16.7	3,267.4	9.4	2,790.4	3.0
16	3,444.2	1.0	2,128.1n	61.6	3,424.9	2,614.3	+15.6	3,258.0	9.7	2,787.4	3.6
17	3,445.2	8	2,063.5n	76.5	3,422.4	2,629.9	+14.6	3,248.3	10.2	2,783.8	4.1
18	3,446.0	7	1,987.0n	93.5	3,419.7	2,644.5	+13.8	3,238.1	10.6	2,779.7	4.9
19	3,446.7	6	1,893.5n	120.2	3,416.9	2,658.3	+13.0	3,227.5	11.0	2,774.8	5.5
20	3,447.3	6	1,773.3n	167.6	3,413.9	2,671.3	+12.1	3,216.5	11.6	2,769.3	6.2
21	3,447.9	4	1,605.7n	277.9	3,410.8	2,683.4	+11.1	3,204.9	12.2	2,763.1	6.9
22	3,448.3	3	1,327.8n	990.9	3,407.5	2,694.8	+10.7	3,192.7	12.6	2,756.2	7.7
23	3,448.6	1	0.336.9n	—	3,404.1	2,705.5	+10.0	3,180.1	13.2	2,748.5	8.4
24	3,448.7	1	1,229.6	328.3	3,400.5	2,715.5	+9.4	3,166.9	13.9	2,740.1	9.3
25	3,448.8	0	1,557.9	184.0	3,396.7	2,721.9	+8.7	3,153.0	14.6	2,730.8	10.1
26	3,448.8	1	1,742.5	129.1	3,392.7	2,733.6	+8.0	3,138.4	15.2	2,720.7	11.0
27	3,448.7	3	1,871.6	99.2	3,388.6	2,741.6	+7.5	3,123.2	16.0	2,709.7	11.9
28	3,448.4	4	1,970.8	80.5	3,384.2	2,749.1	+6.9	3,107.2	16.9	2,697.8	13.0
29	3,448.0	4	2,051.3	67.7	3,379.7	2,756.0	+6.3	3,090.3	17.7	2,684.8	14.0
30	3,447.6	6	2,119.0	58.3	3,375.1	2,762.3	+5.8	3,072.6	18.7	2,670.8	15.2
31					3,370.2	2,768.1	+5.2				

ТАБЛИЦА VI.

Поправка числа.

Годъ.	k.	
1820	— 0,516	+ 0,454
1821		+ 0,211
1822		— 0,031
1823		— 0,273
1824	— 0,515	+ 0,485
1825		+ 0,242
1826		0,000
1827		— 0,212
1828	— 0,484	+ 0,516
1829		+ 0,274
1830		+ 0,031
1831		— 0,211
1832	— 0,453	+ 0,547
1833		+ 0,305
1834		+ 0,062
1835		— 0,180
1836	— 0,422	+ 0,578
1837		+ 0,336
1838		+ 0,094
1839		— 0,149
1840	— 0,390	+ 0,610
1841		+ 0,367
1842		+ 0,125
1843		— 0,117
1844	— 0,360	+ 0,640
1845		+ 0,398
1846		+ 0,156
1847		— 0,086
1848	— 0,329	+ 0,671
1849		+ 0,430
1850		+ 0,188

ТАБЛИЦА VII.

17

Экваторіальной параллель Солнца.

Число.	Паралл.	Log.
0 Янв.	8,72	0,9407
10 —	8,72	0,9406
20 —	8,72	0,9403
30 —	8,70	0,9398
9 Февр.	8,69	0,9390
19 —	8,67	0,9381
1 Мартъ	8,65	0,9371
11 —	8,63	0,9359
21 —	8,60	0,9347
31 —	8,58	0,9335
10 Апр.	8,56	0,9322
20 —	8,53	0,9310
30 —	8,51	0,9299
10 Май	8,49	0,9289
20 —	8,47	0,9280
30 —	8,46	0,9272
9 Июнь	8,45	0,9267
19 —	8,44	0,9263
29 —	8,44	0,9262
9 Июль	8,44	0,9262
19 —	8,44	0,9261
29 —	8,45	0,9269
8 Авг.	8,46	0,9275
18 —	8,48	0,9283
28 —	8,50	0,9293
7 Сент.	8,52	0,9303
17 —	8,54	0,9315
27 —	8,56	0,9327
7 Окт.	8,59	0,9340
17 —	8,61	0,9352
27 —	8,64	0,9364
6 Ноя.	8,66	0,9375
16 —	8,68	0,9385
26 —	8,70	0,9393
6 Дек.	8,71	0,9400
16 —	8,72	0,9404
26 —	8,72	0,9407
36 —	8,72	0,9407

Для приведения высоты, наблюдаемой близъ Меридиана въ Меридіональную.

Часть 1-я.																			Часть 2-я.																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	
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"	0'	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	"	0	10	20	30	"	0	10	20	30	"	0	10	20	30	"	0	10	20	30	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																													
0	0,0	2,0	7,8	17,7	31,4	49,1	70,7	96,2	125,7	159,0	196,3	237,5	282,7	331,8	384,7	441,6	502,5	567,2	"	0	0,00	0,00	0,00	0,00	"	0	0,00	0,00	0,00	0,00	"	0	0,00	0,00	0,00	0,00	"	0	0,00	0,00	0,00	0,00	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
1	0,0	2,0	8,0	17,9	31,7	49,4	71,1	96,7	126,2	159,6	197,0	238,3	283,5	332,6	385,6	442,6	503,5	568,3	"	10	0,00	0,00	0,00	0,00	"	10	0,00	0,00	0,00	0,00	"	10	0,00	0,00	0,00	0,00	"	10	0,00	0,00	0,00	0,00	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
2	0,0	2,1	8,1	18,1	31,9	49,7	71,5	97,1	126,7	160,2	197,6	239,0	284,2	333,4	386,6	443,6	504,6	569,4	"	20	0,00	0,00	0,00	0,00	"	20	0,00	0,00	0,00	0,00	"	20	0,00	0,00	0,00	0,00	"	20	0,00	0,00	0,00	0,00	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
3	0,0	2,2	8,2	18,3	32,2	50,1	71,9	97,6	127,2	160,8	198,3	239,7	285,0	334,3	387,5	444,6	505,6	570,5	"	30	0,00	0,00	0,00	0,00	"	30	0,00	0,00	0,00	0,00	"	30	0,00	0,00	0,00	0,00	"	30	0,00	0,00	0,00	0,00	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																									
4	0,0	2,2	8,4	18,5	32,5	50,4	72,3	98,0	127,8	161,4	198,9	240,4	285,8	335,2	388,4	445,6	506,7	571,6	"																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																	</

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0'	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'	0'	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'	11'	12'	13'	14'	15'	16'	17'	18'
30	0,5	12,3	24,0	39,8	59,4	83,0	110,4	141,8	177,2	216,4	259,6	306,7	357,7	412,7	471,5	534,3	601,0	30	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,11	0,16	0,23	0,31	0,41	0,54	0,69	0,88	30
31	0,5	12,4	24,3	40,1	59,8	83,4	110,9	142,4	177,8	217,1	260,4	307,5	358,6	413,6	472,6	535,4	602,2	31	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,12	0,17	0,24	0,33	0,43	0,56	0,72	0,91	40
32	0,6	12,6	24,5	40,3	60,1	83,8	111,4	143,0	178,4	217,8	261,1	308,4	359,5	414,6	473,6	536,5	603,3	32	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,12	0,17	0,25	0,34	0,45	0,59	0,75	0,95	50
33	0,6	12,8	24,7	40,6	60,5	84,2	111,9	143,5	179,0	218,5	261,9	309,2	360,4	415,5	474,6	537,6	604,5	33	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,13	0,18	0,26	0,35	0,46	0,61	0,78	0,98	60
34	0,6	12,9	25,0	40,9	60,8	84,7	112,4	144,1	179,7	219,2	262,6	310,0	361,3	416,5	475,6	538,7	605,6	34	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,13	0,18	0,27	0,36	0,47	0,62	0,79	0,99	
35	0,7	13,1	25,2	41,2	61,2	85,1	112,9	144,6	180,3	219,9	263,4	310,8	362,2	417,5	476,6	539,7	606,8	35	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,28	0,37	0,48	0,63	0,80		
36	0,7	13,3	25,4	41,5	61,6	85,5	113,4	145,2	180,9	220,6	264,1	311,6	363,1	418,4	477,6	540,8	607,9	36	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,29	0,38	0,49	0,64	0,81		
37	0,7	13,4	25,7	41,8	61,9	86,0	113,9	145,8	181,6	221,3	264,9	312,5	364,0	419,4	478,7	541,9	609,1	37	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,30	0,39	0,50	0,65	0,82		
38	0,8	13,6	25,9	42,1	62,3	86,4	114,4	146,3	182,2	222,0	265,7	313,3	364,8	420,3	479,7	543,0	610,2	38	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,31	0,40	0,51	0,66	0,83		
39	0,8	13,8	26,2	42,5	62,7	86,8	114,9	146,9	182,8	222,7	266,4	314,1	365,7	421,3	480,7	544,1	611,4	39	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,32	0,41	0,52	0,67	0,84		
40	0,9	14,0	26,4	42,8	63,0	87,3	115,4	147,5	183,5	223,4	267,2	315,0	366,6	422,2	481,7	545,2	612,5	40	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,33	0,42	0,53	0,68	0,85		
41	0,9	14,1	26,6	43,1	63,4	87,7	115,9	148,0	184,1	224,1	267,9	315,8	367,5	423,2	482,8	546,3	613,7	41	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,34	0,43	0,54	0,69	0,86		
42	1,0	14,3	26,9	43,4	63,8	88,1	116,4	148,6	184,7	224,8	268,7	316,6	368,4	424,2	483,8	547,4	614,8	42	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,35	0,44	0,55	0,70	0,87		
43	1,0	14,5	27,1	43,7	64,2	88,6	116,9	149,2	185,4	225,5	269,5	317,4	369,3	425,1	484,8	548,4	616,0	43	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,36	0,45	0,56	0,71	0,88		
44	1,1	14,7	27,4	44,0	64,5	89,0	117,4	149,7	186,0	226,2	270,3	318,3	370,2	426,1	485,8	549,5	617,2	44	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,37	0,46	0,57	0,72	0,89		
45	1,1	14,8	27,6	44,3	64,9	89,5	117,9	150,3	186,6	226,9	271,0	319,1	371,1	427,0	486,9	550,6	618,3	45	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,38	0,47	0,58	0,73	0,90		
46	1,2	15,0	27,9	44,6	65,3	89,9	118,4	150,9	187,3	227,6	271,8	319,9	372,0	428,0	487,9	551,7	619,5	46	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,39	0,48	0,59	0,74	0,91		
47	1,2	15,2	28,1	44,9	65,7	90,3	118,9	151,5	187,9	228,3	272,6	320,8	372,9	429,0	488,9	552,8	620,6	47	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,40	0,49	0,60	0,75	0,92		
48	1,3	15,4	28,3	45,2	66,0	90,8	119,5	152,0	188,5	229,0	273,3	321,6	373,8	429,9	490,0	553,9	621,8	48	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,41	0,50	0,61	0,76	0,93		
49	1,3	15,6	28,6	45,5	66,4	91,2	120,0	152,6	189,2	229,7	274,1	322,4	374,7	430,9	491,0	555,0	623,0	49	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,42	0,51	0,62	0,77	0,94		
50	1,4	15,8	28,8	45,9	66,8	91,7	120,5	153,2	189,8	230,4	274,9	323,3	375,6	431,9	492,0	556,1	624,1	50	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,43	0,52	0,63	0,78	0,95		
51	1,4	15,9	29,1	46,2	67,2	92,1	121,0	153,8	190,5	231,1	275,6	324,1	376,5	432,8	493,1	557,2	625,3	51	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,44	0,53	0,64	0,79	0,96		
52	1,5	16,1	29,4	46,5	67,6	92,6	121,5	154,4	191,1	231,8	276,4	325,0	377,4	433,8	494,1	558,3	626,5	52	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,45	0,54	0,65	0,80	0,97		
53	1,5	16,3	29,6	46,8	68,0	93,0	122,0	154,9	191,8	232,5	277,2	325,8	378,3	434,8	495,2	559,4	627,6	53	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,46	0,55	0,66	0,81	0,98		
54	1,6	16,5	29,9	47,1	68,3	93,5	122,5	155,5	192,4	233,2	278,0	326,7	379,3	435,8	496,2	560,5	628,8	54	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,47	0,56	0,67	0,82	0,99		
55	1,6	16,7	30,1	47,5	68,7	93,9	123,1	156,1	193,1	234,0	278,8	327,5	380,2	436,7	497,2	561,6	630,0	55	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,48	0,57	0,68	0,83	1,00		
56	1,7	16,9	30,4	47,8	69,1	94,4	123,6	156,7	193,7	234,7	279,5	328,4	381,1	437,7	498,3	562,7	631,2	56	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,49	0,58	0,69	0,84	1,01		
57	1,8	17,1	30,6	48,1	69,5	94,8	124,1	157,3	194,4	235,4	280,3	329,2	382,0	438,7	499,3	563,9	632,3	57	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,50	0,59	0,70	0,85	1,02		
58	1,8	17,3	30,9	48,4	69,9	95,3	124,6	157,8	195,0	236,1	281,1	330,0	382,9	439,7	500,3	565,0	633,5	58	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,51	0,60	0,71	0,86	1,03		
59	1,9	17,5	31,1	48,8	70,3	95,7	125,1	158,4	195,7	236,8	281,9	330,9	383,8	440,6	501,1	566,1	634,7	59	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,52	0,61	0,72	0,87	1,04		
60	2,0	17,7	31,4	49,1	70,7	96,2	125,7	159,0	196,3	237,5	282,7	331,8	384,7	441,6	502,5	567,2	635,9	60	0,00	0,00	0,00	0,00	0,00	0,01	0,02	0,03	0,05	0,08	0,14	0,19	0,53	0,62	0,73	0,88	1,05		

Продолженіе.

Ч а с ы 1-я

м

"	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	30'	31'	32'	33'	34'	35'	"
0	635,9	708,4	784,9	865,3	949,6	1037,8	1129,9	1225,9	1325,9	1429,9	1537,5	1649,0	1764,6	1884,0	2007,4	2134,6	2265,6	2400,6	0
1	637,0	709,7	786,2	866,6	951,0	1039,3	1131,4	1227,5	1327,6	1431,4	1539,3	1650,9	1766,6	1886,0	2009,4	2136,8	2267,8	2402,9	1
2	638,2	710,9	787,5	868,0	952,4	1040,8	1133,0	1229,2	1329,3	1433,2	1541,1	1652,8	1768,5	1888,0	2011,5	2138,9	2270,0	2405,2	2
3	639,4	712,1	788,8	869,4	953,8	1042,3	1134,6	1230,8	1331,0	1434,9	1542,9	1654,7	1770,5	1890,0	2013,6	2141,1	2272,2	2407,5	3
4	640,6	713,4	790,1	870,8	955,3	1043,8	1136,2	1232,5	1332,7	1436,7	1544,8	1656,6	1772,4	1892,1	2015,7	2143,2	2274,5	2409,8	4
5	641,7	714,6	791,4	872,1	956,7	1045,3	1137,8	1234,1	1334,4	1438,5	1546,6	1658,5	1774,4	1894,1	2017,8	2145,3	2276,7	2412,0	5
6	642,9	715,9	792,7	873,5	958,2	1046,8	1139,3	1235,7	1336,1	1440,3	1548,4	1660,4	1776,3	1896,1	2019,9	2147,5	2278,9	2414,3	6
7	644,1	717,1	794,0	874,9	959,6	1048,3	1140,9	1237,3	1337,8	1442,1	1550,2	1662,3	1778,3	1898,1	2022,0	2149,7	2281,2	2416,6	7
8	645,3	718,4	795,4	876,3	961,1	1049,8	1142,5	1239,0	1339,5	1443,9	1552,1	1664,2	1780,3	1900,2	2024,1	2151,8	2283,4	2418,9	8
9	646,5	719,6	796,7	877,6	962,5	1051,3	1144,0	1240,6	1341,2	1445,6	1553,9	1666,1	1782,3	1902,2	2026,2	2153,9	2285,6	2421,2	9
10	647,7	720,9	798,0	879,0	963,9	1052,8	1145,6	1242,3	1342,9	1447,4	1555,8	1668,0	1784,2	1904,3	2028,3	2156,1	2287,8	2423,5	10
11	648,9	722,1	799,3	880,4	965,4	1054,3	1147,2	1243,9	1344,6	1449,2	1557,6	1669,9	1786,2	1906,3	2030,5	2158,3	2290,0	2425,8	11
12	650,0	723,4	800,7	881,8	966,9	1055,9	1148,8	1245,6	1346,3	1451,0	1559,5	1671,9	1788,2	1908,4	2032,5	2160,5	2292,3	2428,1	12
13	651,2	724,6	802,0	883,2	968,3	1057,4	1150,4	1247,2	1348,0	1452,8	1561,3	1673,8	1790,1	1910,4	2034,6	2162,6	2294,5	2430,4	13
14	652,4	725,9	803,3	884,6	969,8	1058,9	1152,0	1248,9	1349,7	1454,5	1563,2	1675,7	1792,1	1912,4	2036,7	2164,8	2296,8	2432,7	14
15	653,6	727,2	804,6	886,0	971,2	1060,4	1153,6	1250,5	1351,4	1456,3	1565,0	1677,6	1794,1	1914,4	2038,8	2166,9	2299,0	2435,0	15
16	654,8	728,4	806,0	887,4	972,7	1062,0	1155,2	1252,2	1353,2	1458,1	1566,9	1679,5	1796,1	1916,5	2040,9	2169,1	2301,3	2437,3	16
17	656,0	729,7	807,3	888,8	974,1	1063,5	1156,8	1253,8	1354,9	1459,9	1568,7	1681,4	1798,1	1918,5	2043,0	2171,2	2303,6	2439,6	17
18	657,2	730,9	808,6	890,2	975,5	1065,0	1158,3	1255,5	1356,6	1461,6	1570,5	1683,3	1800,0	1920,6	2045,1	2173,4	2305,8	2441,9	18
19	658,4	732,2	809,9	891,6	977,0	1066,5	1159,9	1257,1	1358,3	1463,4	1572,4	1685,2	1802,0	1922,6	2047,2	2175,6	2308,0	2444,2	19
20	659,6	733,5	811,3	893,0	978,5	1068,1	1161,5	1258,8	1360,1	1465,2	1574,3	1687,2	1804,0	1924,7	2049,3	2177,8	2310,2	2446,5	20
21	660,8	734,7	812,6	894,4	979,9	1069,6	1163,1	1260,4	1361,8	1466,9	1576,1	1689,1	1805,9	1926,7	2051,4	2179,9	2312,4	2448,8	21
22	662,0	736,0	813,9	895,8	981,4	1071,1	1164,7	1262,1	1363,5	1468,7	1578,0	1691,0	1807,9	1928,8	2053,5	2182,1	2314,7	2451,1	22
23	663,2	737,3	815,2	897,2	982,9	1072,6	1166,3	1263,7	1365,2	1470,5	1579,8	1692,9	1809,9	1930,8	2055,7	2184,3	2316,9	2453,4	23
24	664,4	738,5	816,6	898,6	984,4	1074,2	1167,9	1265,4	1367,0	1472,3	1581,7	1694,8	1811,9	1932,9	2057,8	2186,5	2319,2	2455,7	24
25	665,6	739,8	817,9	900,0	985,8	1075,7	1169,5	1267,0	1368,7	1474,0	1583,5	1696,7	1813,9	1935,0	2059,9	2188,6	2321,5	2458,0	25
26	666,8	741,1	819,2	901,4	987,3	1077,2	1171,1	1268,7	1370,4	1475,9	1585,3	1698,6	1815,8	1937,0	2062,0	2190,8	2323,7	2460,3	26
27	668,0	742,3	820,5	902,8	988,8	1078,7	1172,7	1270,3	1372,1	1477,7	1587,2	1700,5	1817,8	1939,0	2064,1	2193,0	2325,9	2462,6	27
28	669,2	743,6	821,9	904,2	990,3	1080,3	1174,3	1272,1	1373,9	1479,5	1589,1	1702,5	1819,8	1941,1	2066,2	2195,2	2328,2	2464,9	28
29	670,4	744,9	823,2	905,6	991,8	1081,8	1175,9	1273,7	1375,6	1481,3	1590,9	1704,4	1821,8	1943,1	2068,3	2197,3	2330,4	2467,2	29
30	671,6	746,2	824,6	907,0	993,2	1083,3	1177,5	1275,4	1377,4	1483,4	1592,7	1706,3	1823,8	1945,2	2070,4	2199,5	2332,7	2469,5	30

Ч а с ы 2-я

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"	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	30'	31'	32'	33'	34'	35'	"
0	0,98	1,22	1,49	1,82	2,19	2,61	3,10	3,64	4,26	4,96	5,73	6,59	7,55	8,61	9,77	11,04	12,44	13,97	0
10	1,02	1,26	1,54	1,87	2,25	2,69	3,18	3,74	4,37	5,08	5,87	6,75	7,62	8,79	9,97	11,27	12,69	14,24	10
20	1,06	1,30	1,60	1,93	2,32	2,77	3,27	3,84	4,48	5,20	6,01	6,90	7,89	8,98	10,18	11,50	12,94	14,51	20
30	1,09	1,35	1,65	1,99	2,39	2,85	3,36	3,94	4,60	5,33	6,15	7,06	8,06	9,17	10,39	11,73	13,19	14,78	30

Продолжение.

Часть 1-я		м																		Часть 2-я.		П.	
"	"	18'	19'	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'	30'	31'	32'	33'	34'	35'	"	"	"	"
30	671,6	746,2	824,6	907,0	993,2	1083,3	1177,5	1275,4	1377,4	1483,1	1592,7	1706,3	1823,8	1945,2	2070,4	2199,5	2332,7	2469,5	30	1,09	1,35	1,65	1,99
31	672,8	747,4	825,9	908,4	994,7	1084,8	1179,1	1277,1	1379,0	1484,9	1594,6	1708,2	1825,8	1947,2	2072,6	2201,7	2334,9	2471,8	31	1,13	1,40	1,70	2,06
32	674,1	748,7	827,3	909,8	996,2	1086,4	1180,7	1278,8	1380,8	1486,7	1596,5	1710,2	1827,8	1949,3	2074,7	2203,9	2337,2	2474,2	32	1,18	1,44	1,76	2,12
33	675,3	750,0	828,6	911,2	997,6	1087,9	1182,7	1280,4	1382,5	1488,5	1598,3	1712,1	1829,8	1951,3	2076,8	2206,1	2339,4	2476,5	33	1,22	1,49	1,82	2,19
34	676,5	751,3	829,9	912,6	999,1	1089,5	1183,9	1282,1	1384,2	1490,3	1600,2	1714,0	1831,8	1953,4	2078,9	2208,3	2341,7	2478,8	34	1,27	1,54	1,88	2,24
35	677,7	752,6	831,2	914,0	1000,6	1091,0	1185,5	1283,8	1385,9	1492,1	1602,1	1715,9	1833,8	1955,5	2081,0	2210,5	2343,9	2481,1	35	1,32	1,59	1,93	2,29
36	678,9	753,8	832,6	915,5	1002,1	1092,6	1187,1	1285,5	1387,7	1493,9	1604,0	1717,9	1835,8	1957,6	2083,2	2212,7	2346,2	2483,5	36	1,37	1,64	1,98	2,34
37	680,1	755,1	833,9	916,9	1003,5	1094,1	1188,7	1287,1	1389,4	1495,7	1605,9	1719,8	1837,8	1959,6	2085,3	2214,9	2348,5	2485,8	37	1,42	1,69	2,03	2,39
38	681,3	756,4	835,3	918,3	1005,0	1095,7	1190,3	1288,8	1391,2	1497,5	1607,7	1721,7	1839,8	1961,7	2087,4	2217,1	2350,7	2488,1	38	1,47	1,74	2,08	2,44
39	682,6	757,7	836,6	919,7	1006,5	1097,2	1191,9	1290,5	1392,9	1499,3	1609,6	1723,6	1841,8	1963,7	2089,6	2219,3	2353,0	2490,4	39	1,52	1,79	2,13	2,49
40	683,8	759,0	838,0	921,1	1008,0	1098,8	1193,5	1292,2	1394,7	1501,1	1611,5	1725,6	1843,8	1965,8	2091,7	2221,5	2355,2	2492,8	40	1,57	1,84	2,18	2,54
41	685,0	760,2	839,3	922,5	1009,4	1100,3	1195,1	1293,8	1396,4	1502,9	1613,3	1727,5	1845,8	1967,8	2093,8	2223,7	2357,5	2495,1	41	1,62	1,89	2,23	2,59
42	686,2	761,5	840,7	923,9	1010,9	1101,9	1196,7	1295,5	1398,2	1504,7	1615,2	1729,5	1847,8	1969,9	2095,9	2225,9	2359,7	2497,4	42	1,67	1,94	2,28	2,64
43	687,4	762,8	842,0	925,3	1012,4	1103,4	1198,3	1297,2	1399,9	1506,5	1617,1	1731,5	1849,8	1972,0	2098,0	2228,1	2361,9	2499,7	43	1,72	1,99	2,33	2,69
44	688,7	764,1	843,4	926,8	1013,9	1105,0	1199,9	1298,9	1401,7	1508,4	1619,0	1733,4	1851,8	1974,1	2100,2	2230,3	2364,2	2502,1	44	1,77	2,04	2,38	2,74
45	689,9	765,4	844,7	928,2	1015,4	1106,5	1201,5	1300,5	1403,4	1510,2	1620,8	1735,3	1853,8	1976,1	2102,3	2232,5	2366,4	2504,4	45	1,82	2,09	2,43	2,79
46	691,1	766,7	846,1	929,6	1016,9	1108,1	1203,1	1302,2	1405,2	1512,0	1622,7	1737,2	1855,8	1978,2	2104,5	2234,7	2368,7	2506,7	46	1,87	2,14	2,48	2,84
47	692,4	768,0	847,5	931,0	1018,4	1109,6	1204,7	1303,9	1406,9	1513,8	1624,6	1739,2	1857,8	1980,3	2106,6	2236,9	2371,0	2509,0	47	1,92	2,19	2,53	2,89
48	693,6	769,3	848,9	932,4	1019,9	1111,2	1206,4	1305,6	1408,7	1515,6	1626,5	1741,2	1859,8	1982,4	2108,8	2239,1	2373,3	2511,4	48	1,97	2,24	2,58	2,94
49	694,8	770,6	850,2	933,8	1021,4	1112,7	1208,0	1307,3	1410,4	1517,4	1628,3	1743,1	1861,8	1984,4	2110,9	2241,3	2375,5	2513,7	49	2,02	2,29	2,63	2,99
50	696,0	771,9	851,6	935,2	1022,8	1114,3	1209,6	1309,0	1412,2	1519,2	1630,2	1745,1	1863,8	1986,5	2113,1	2243,5	2377,8	2516,1	50	2,07	2,34	2,68	3,04
51	697,3	773,1	852,9	936,6	1024,3	1115,8	1211,2	1310,7	1413,9	1521,0	1632,1	1747,0	1865,8	1988,6	2115,2	2245,7	2380,1	2518,4	51	2,12	2,39	2,73	3,09
52	698,5	774,5	854,3	938,1	1025,8	1117,4	1212,9	1312,4	1415,7	1522,9	1634,0	1749,0	1867,8	1990,7	2117,4	2247,9	2382,4	2520,8	52	2,17	2,44	2,78	3,14
53	699,7	775,8	855,6	939,5	1027,3	1118,9	1214,5	1314,1	1417,4	1524,7	1635,9	1750,9	1869,8	1992,7	2119,6	2250,1	2384,6	2523,1	53	2,22	2,49	2,83	3,19
54	701,0	777,1	857,1	940,9	1028,8	1120,5	1216,1	1315,7	1419,2	1526,5	1637,7	1752,9	1871,8	1994,8	2121,7	2252,3	2386,9	2525,4	54	2,27	2,54	2,88	3,24
55	702,2	778,4	858,4	942,3	1030,3	1122,0	1217,7	1317,4	1420,9	1528,3	1639,6	1754,8	1873,8	1996,9	2123,8	2254,5	2389,2	2527,7	55	2,32	2,59	2,93	3,29
56	703,5	779,7	859,8	943,8	1031,8	1123,6	1219,4	1319,1	1422,7	1530,2	1641,5	1756,8	1875,9	1999,0	2126,0	2256,7	2391,5	2530,1	56	2,37	2,64	2,98	3,34
57	704,7	781,0	861,1	945,2	1033,3	1125,1	1221,0	1320,8	1424,4	1532,0	1643,3	1758,7	1877,9	2001,0	2128,1	2258,9	2393,7	2532,4	57	2,42	2,69	3,03	3,39
58	705,9	782,3	862,5	946,6	1034,8	1126,7	1222,6	1322,5	1426,2	1533,8	1645,2	1760,7	1879,9	2003,1	2130,3	2261,1	2396,0	2534,8	58	2,47	2,74	3,08	3,44
59	707,1	783,6	863,9	948,1	1036,3	1128,3	1224,2	1324,2	1427,9	1535,6	1647,1	1762,6	1882,0	2005,3	2132,4	2263,4	2398,3	2537,1	59	2,52	2,79	3,13	3,49
60	708,3	784,9	865,3	949,6	1037,8	1129,9	1225,9	1325,9	1429,7	1537,5	1649,0	1764,6	1884,0	2007,1	2134,6	2265,6	2400,6	2539,5	60	2,57	2,84	3,18	3,54

ν	0	1'	2'	3'	4'	5'	6'	7'	8'	9'
0	∞	4,67757	5,27963	5,63181	5,88168	6,07550	6,23385	6,36774	6,48377	6,58600
1	1,12127	4,69193	5,28684	5,63662	5,88530	6,07839	6,23626	6,36980	6,48552	6,58761
2	1,72333	4,70605	5,29399	5,64141	5,88889	6,08127	6,23866	6,37186	6,48732	6,58921
3	2,07551	4,71995	5,30108	5,64617	5,89247	6,08414	6,24060	6,37392	6,48912	6,59082
4	2,32539	4,73363	5,30811	5,65090	5,89604	6,08700	6,24345	6,37597	6,49092	6,59241
5	2,51921	4,74710	5,31509	5,65561	5,89959	6,08985	6,24583	6,37802	6,49271	6,59401
6	2,67757	4,76036	5,32201	5,66029	5,90313	6,09270	6,24821	6,38006	6,49450	6,59560
7	2,81147	4,77342	5,32888	5,66495	5,90665	6,09543	6,25058	6,38209	6,49628	6,59719
8	2,92745	4,78629	5,33569	5,66958	5,91016	6,09836	6,25294	6,38412	6,49807	6,59878
9	2,02976	4,79898	5,34245	5,67419	5,91366	6,10117	6,25530	6,38615	6,49984	6,59036
10	2,12127	4,81147	5,34916	5,67877	5,91714	6,10398	6,25765	6,38817	6,50162	6,60194
11	3,20406	4,82379	5,35581	5,68333	5,92062	6,10677	6,25999	6,39019	6,50339	6,60352
12	3,27963	4,83594	5,36242	5,68787	5,92406	6,10956	6,26233	6,39220	6,50516	6,60509
13	3,34916	4,84792	5,36897	5,69238	5,92750	6,11234	6,26466	6,39421	6,50692	6,60666
14	3,41353	4,85973	5,37548	5,69687	5,93093	6,11511	6,26699	6,39622	6,50868	6,60823
15	3,47345	4,87139	5,38194	5,70133	5,93434	6,11787	6,26931	6,39821	6,51044	6,60980
16	3,52951	4,88290	5,38835	5,70578	5,93774	6,12063	6,27162	6,40021	6,51219	6,61136
17	3,58217	4,89425	5,39471	5,71020	5,94113	6,12337	6,27393	6,40220	6,51394	6,61292
18	3,63182	4,90546	5,40103	5,71460	5,94450	6,12611	6,27623	6,40418	6,51568	6,61448
19	3,67878	4,91652	5,40730	5,71897	5,94786	6,12883	6,27852	6,40616	6,51743	6,61604
20	3,72333	4,92745	5,41352	5,72332	5,95121	6,13155	6,28081	6,40814	6,51916	6,61759
21	3,76571	4,93824	5,41971	5,72766	5,95454	6,13426	6,28309	6,41011	6,52090	6,61914
22	3,80612	4,94890	5,42585	5,73197	5,95786	6,13696	6,28537	6,41208	6,52263	6,62068
23	3,84473	4,95943	5,43194	5,73626	5,96117	6,13966	6,28764	6,41404	6,52436	6,62223
24	3,88169	4,96983	5,43799	5,74052	5,96447	6,14234	6,28991	6,41600	6,52608	6,62377
25	3,91715	4,98011	5,44400	5,74476	5,96776	6,14502	6,29217	6,41795	6,52781	6,62531
26	3,95122	4,99027	5,44997	5,74900	5,97102	6,14769	6,29442	6,41990	6,52952	6,62684
27	3,98400	5,00031	5,45590	5,75320	5,97428	6,15035	6,29667	6,42185	6,53124	6,62838
28	4,01559	5,01024	5,46179	5,75739	5,97753	6,15300	6,29891	6,42379	6,53295	6,62991
29	4,04607	5,02005	5,46764	5,76156	5,98076	6,15564	6,30114	6,42573	6,53466	6,63143
30	4,07551	5,02976	5,47345	5,76570	5,98399	6,15828	6,30337	6,42766	6,53636	6,63296
31	4,10400	5,03935	5,47922	5,76983	5,98720	6,16091	6,30550	6,42959	6,53806	6,63448
32	4,13157	5,04885	5,48496	5,77394	5,99040	6,16353	6,30782	6,43151	6,53976	6,63600
33	4,15830	5,05824	5,49065	5,77802	5,99358	6,16614	6,31003	6,43344	6,54146	6,63752
34	4,18423	5,06753	5,49631	5,78209	5,99676	6,16874	6,31223	6,43534	6,54315	6,63903
35	4,20941	5,07672	5,50193	5,78614	5,99992	6,17134	6,31444	6,43726	6,54484	6,64054
36	4,23388	5,08581	5,50752	5,79017	6,00308	6,17393	6,31663	6,43916	6,54652	6,64205
37	4,25768	5,09480	5,51307	5,79418	6,00622	6,17651	6,31882	6,44106	6,54820	6,64356
38	4,28084	5,10372	5,51858	5,79818	6,00935	6,17908	6,32101	6,44296	6,55988	6,64506
39	4,30340	5,11254	5,52406	5,80215	6,01247	6,18161	6,32319	6,44486	6,55156	6,64617
40	4,32539	5,12127	5,52951	5,80611	6,01557	6,18421	6,32536	6,44675	6,55323	6,64806
41	4,34684	5,12991	5,53492	5,81005	6,01867	6,18676	6,32753	6,44863	6,55490	6,64956
42	4,36777	5,13848	5,54030	5,81397	6,02176	6,18930	6,32969	6,45052	6,55656	6,65105
43	4,38821	5,14694	5,54564	5,81787	6,02483	6,19204	6,33185	6,45239	6,55822	6,65254
44	4,40818	5,15534	5,55095	5,82176	6,02789	6,19437	6,33400	6,45427	6,55988	6,65403
45	4,42770	5,16365	5,55623	5,82563	6,03095	6,19689	6,33615	6,45614	6,56154	6,65552
46	4,44679	5,17188	5,56148	5,82948	6,03399	6,19940	6,33829	6,45800	6,56319	6,65700
47	4,46547	5,18004	5,56670	5,83331	6,03702	6,20181	6,34043	6,45986	6,56484	6,65848
48	4,48375	5,18812	5,57189	5,83713	6,04004	6,20441	6,34256	6,46172	6,56649	6,65996
49	4,50166	5,19612	5,57704	5,84093	6,04305	6,20690	6,34469	6,46358	6,56813	6,66144
50	4,51921	5,20406	5,58216	5,84472	6,04605	6,20938	6,34681	6,46543	6,56977	6,66291
51	4,53641	5,21192	5,58726	5,84849	6,04904	6,21186	6,34892	6,46727	6,57141	6,66438
52	4,55328	5,21971	5,59232	5,85244	6,05202	6,21433	6,35103	6,46911	6,57304	6,66585
53	4,56982	5,22744	5,59736	5,85597	6,05499	6,21680	6,35314	6,47095	6,57467	6,66731
54	4,58606	5,23508	5,60236	5,85969	6,05795	6,21925	6,35524	6,47279	6,57630	6,66878
55	4,60200	5,24267	5,60734	5,86340	6,06090	6,22170	6,35733	6,47462	6,57793	6,67024
56	4,61765	5,25019	5,61229	5,86709	6,06384	6,22415	6,35943	6,47644	6,57955	6,67170
57	4,63302	5,25764	5,61721	5,87076	6,06677	6,22658	6,36151	6,47827	6,58117	6,67315
58	4,64813	5,26503	5,62211	5,87442	6,06969	6,22901	6,36359	6,48008	6,58278	6,67461
59	4,66298	5,27236	5,62697	5,87806	6,07260	6,23144	6,36567	6,48190	6,58439	6,67606
60	4,67757	5,27963	5,63181	5,88168	6,07550	6,23385	6,36774	6,48371	6,58600	6,67751

"	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'
0	6,67751	6,76028	6,83583	6,90535	6,96970	7,02960	7,08564	7,13827	7,18790	7,23483
1	6,67895	6,76159	6,83704	6,90646	6,97073	7,03057	7,08654	7,13912	7,18870	7,23559
2	6,68040	6,76290	6,83826	6,90757	6,97176	7,03153	7,08745	7,13997	7,18950	7,23635
3	6,68184	6,76422	6,83945	6,90868	6,97279	7,03249	7,08835	7,14082	7,19030	7,23711
4	6,68328	6,76552	6,84065	6,90979	6,97382	7,03345	7,08925	7,14167	7,19110	7,23787
5	6,68471	6,76683	6,84185	6,91089	6,97485	7,03441	7,09015	7,14252	7,19190	7,23863
6	6,68615	6,76814	6,84304	6,91200	6,97588	7,03537	7,09105	7,14337	7,19270	7,23939
7	6,68758	6,76944	6,84424	6,91310	6,97690	7,03633	7,09195	7,14421	7,19350	7,24015
8	6,68901	6,77074	6,84543	6,91421	6,97793	7,03729	7,09284	7,14506	7,19430	7,24090
9	6,69044	6,77204	6,84663	6,91531	6,97895	7,03824	7,09374	7,14590	7,19510	7,24166
10	6,69186	6,77334	6,84782	6,91641	6,97997	7,03920	7,09464	7,14674	7,19589	7,24241
11	6,69328	6,77463	6,84900	6,91751	6,98099	7,04015	7,09553	7,14759	7,19669	7,24317
12	6,69470	6,77592	6,85019	6,91860	6,98201	7,04110	7,09642	7,14843	7,19749	7,24392
13	6,69612	6,77722	6,85138	6,91970	6,98303	7,04205	7,09732	7,14927	7,19829	7,24468
14	6,69754	6,77851	6,85256	6,92079	6,98405	7,04300	7,09821	7,15011	7,19908	7,24543
15	6,69895	6,77979	6,85374	6,92189	6,98506	7,04395	7,09910	7,15095	7,19987	7,24618
16	6,70036	6,78108	6,85492	6,92298	6,98608	7,04490	7,09999	7,15179	7,20066	7,24693
17	6,70177	6,78236	6,85610	6,92407	6,98709	7,04585	7,10088	7,15262	7,20145	7,24768
18	6,70318	6,78364	6,85728	6,92516	6,98811	7,04680	7,10177	7,15346	7,20224	7,24843
19	6,70458	6,78492	6,85846	6,92624	6,98912	7,04774	7,10265	7,15430	7,20303	7,24918
20	6,70598	6,78620	6,85963	6,92733	6,99013	7,04869	7,10354	7,15513	7,20382	7,24993
21	6,70738	6,78748	6,86080	6,92841	6,99114	7,04963	7,10443	7,15597	7,20461	7,25068
22	6,70878	6,78875	6,86197	6,92950	6,99214	7,05057	7,10531	7,15680	7,20540	7,25143
23	6,71017	6,79002	6,86314	6,93058	6,99315	7,05151	7,10619	7,15763	7,20619	7,25217
24	6,71157	6,79129	6,86431	6,93166	6,99416	7,05245	7,10708	7,15846	7,20698	7,25292
25	6,71296	6,79256	6,86548	6,93274	6,99516	7,05339	7,10796	7,15930	7,20776	7,25366
26	6,71435	6,79383	6,86664	6,93382	6,99616	7,05433	7,10884	7,16013	7,20855	7,25441
27	6,71573	6,79510	6,86781	6,93489	6,99717	7,05527	7,10972	7,16096	7,20933	7,25515
28	6,71712	6,79636	6,86897	6,93597	6,99817	7,05620	7,11060	7,16178	7,21012	7,25590
29	6,71850	6,79762	6,87013	6,93704	6,99917	7,05714	7,11148	7,16261	7,21090	7,25664
30	6,71988	6,79888	6,87129	6,93812	7,00017	7,05807	7,11235	7,16344	7,21168	7,25738
31	6,72125	6,80014	6,87244	6,93919	7,00116	7,05901	7,11323	7,16427	7,21246	7,25812
32	6,72263	6,80139	6,87360	6,94026	7,00216	7,05994	7,11411	7,16510	7,21324	7,25886
33	6,72400	6,80265	6,87475	6,94133	7,00315	7,06087	7,11498	7,16592	7,21402	7,25960
34	6,72537	6,80390	6,87591	6,94239	7,00415	7,06180	7,11586	7,16674	7,21480	7,26034
35	6,72674	6,80515	6,87707	6,94346	7,00514	7,06273	7,11673	7,16756	7,21558	7,26108
36	6,72811	6,80640	6,87821	6,94453	7,00613	7,06366	7,11760	7,16839	7,21636	7,26182
37	6,72947	6,80764	6,87935	6,94559	7,00712	7,06458	7,11847	7,16921	7,21714	7,26256
38	6,73084	6,80889	6,88050	6,94665	7,00811	7,06551	7,11934	7,17003	7,21791	7,26330
39	6,73220	6,81013	6,88165	6,94771	7,00910	7,06643	7,12021	7,17085	7,21868	7,26403
40	6,73355	6,81137	6,88279	6,94877	7,01009	7,06736	7,12108	7,17167	7,21946	7,26477
41	6,73491	6,81261	6,88393	6,94983	7,01108	7,06828	7,12195	7,17249	7,22024	7,26550
42	6,73626	6,81385	6,88507	6,95089	7,01206	7,06920	7,12281	7,17331	7,22102	7,26624
43	6,73762	6,81509	6,88621	6,95194	7,01304	7,07013	7,12368	7,17412	7,22179	7,26697
44	6,73896	6,81632	6,88735	6,95300	7,01403	7,07105	7,12455	7,17494	7,22256	7,26771
45	6,74031	6,81756	6,88848	6,95405	7,01501	7,07196	7,12541	7,17575	7,22333	7,26844
46	6,74166	6,81879	6,88962	6,95510	7,01599	7,07288	7,12627	7,17657	7,22411	7,26917
47	6,74300	6,82002	6,89075	6,95615	7,01697	7,07380	7,12713	7,17738	7,22488	7,26990
48	6,74434	6,82124	6,89188	6,95720	7,01795	7,07472	7,12800	7,17820	7,22565	7,27064
49	6,74568	6,82247	6,89301	6,95825	7,01892	7,07563	7,12886	7,17901	7,22642	7,27137
50	6,74702	6,82369	6,89414	6,95930	7,01990	7,07655	7,12972	7,17982	7,22718	7,27210
51	6,74835	6,82491	6,89527	6,96034	7,02088	7,07746	7,13058	7,18063	7,22795	7,27282
52	6,74969	6,82614	6,89639	6,96139	7,02185	7,07837	7,13144	7,18144	7,22872	7,27355
53	6,75102	6,82735	6,89752	6,96243	7,02282	7,07928	7,13229	7,18225	7,22949	7,27428
54	6,75235	6,82857	6,89864	6,96347	7,02379	7,08019	7,13315	7,18306	7,23025	7,27501
55	6,75367	6,82979	6,89976	6,96451	7,02477	7,08110	7,13401	7,18387	7,23102	7,27573
56	6,75500	6,83100	6,90088	6,96555	7,02573	7,08201	7,13486	7,18468	7,23178	7,27646
57	6,75632	6,83221	6,90200	6,96659	7,02670	7,08292	7,13572	7,18548	7,23255	7,27719
58	6,75764	6,83342	6,90312	6,96763	7,02767	7,08383	7,13657	7,18629	7,23331	7,27791
59	6,75896	6,83463	6,90423	6,96866	7,02864	7,08473	7,13742	7,18709	7,23407	7,27864
60	6,76028	6,83584	6,90535	6,96970	7,02960	7,08564	7,13827	7,18790	7,23483	7,27936

"	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'
0	7,27936	7,32171	7,36209	7,40067	7,43760	7,47302	7,50706	7,53980	7,57135	7,60179
1	7,28008	7,32240	7,36274	7,40129	7,43820	7,47360	7,50761	7,54034	7,57187	7,60229
2	7,28080	7,32309	7,36340	7,40192	7,43880	7,47418	7,50817	7,54087	7,57238	7,60279
3	7,28153	7,32377	7,36406	7,40255	7,43941	7,47476	7,50872	7,54140	7,57290	7,60329
4	7,28225	7,32446	7,36471	7,40318	7,44001	7,47533	7,50928	7,54194	7,57341	7,60378
5	7,28297	7,32515	7,36537	7,40380	7,44061	7,47591	7,50983	7,54247	7,57393	7,60428
6	7,28369	7,32583	7,36602	7,40443	7,44121	7,47649	7,51039	7,54301	7,57444	7,60478
7	7,28441	7,32652	7,36668	7,40506	7,44181	7,47706	7,51094	7,54354	7,57496	7,60527
8	7,28513	7,32720	7,36733	7,40568	7,44241	7,47764	7,51149	7,54407	7,57547	7,60577
9	7,28584	7,32789	7,36798	7,40631	7,44301	7,47821	7,51205	7,54461	7,57599	7,60626
10	7,28656	7,32857	7,36864	7,40693	7,44361	7,47879	7,51260	7,54514	7,57650	7,60676
11	7,28728	7,32925	7,36929	7,40756	7,44420	7,47936	7,51315	7,54567	7,57701	7,60726
12	7,28800	7,32994	7,36994	7,40818	7,44480	7,47994	7,51370	7,54620	7,57753	7,60775
13	7,28871	7,33062	7,37059	7,40880	7,44540	7,48051	7,51426	7,54673	7,57804	7,60825
14	7,28943	7,33130	7,37124	7,40943	7,44600	7,48109	7,51481	7,54727	7,57855	7,60874
15	7,29014	7,33198	7,37189	7,41005	7,44659	7,48166	7,51536	7,54780	7,57906	7,60924
16	7,29086	7,33266	7,37254	7,41067	7,44719	7,48223	7,51591	7,54833	7,57957	7,60973
17	7,29157	7,33334	7,37319	7,41129	7,44778	7,48280	7,51646	7,54886	7,58008	7,61022
18	7,29228	7,33402	7,37384	7,41191	7,44838	7,48337	7,51701	7,54939	7,58060	7,61072
19	7,29299	7,33470	7,37449	7,41253	7,44898	7,48395	7,51756	7,54992	7,58111	7,61121
20	7,29371	7,33538	7,37514	7,41315	7,44957	7,48452	7,51811	7,55045	7,58162	7,61170
21	7,29442	7,33606	7,37579	7,41377	7,45016	7,48509	7,51866	7,55097	7,58213	7,61220
22	7,29513	7,33673	7,37643	7,41439	7,45076	7,48566	7,51921	7,55150	7,58264	7,61269
23	7,29584	7,33741	7,37708	7,41501	7,45135	7,48623	7,51975	7,55203	7,58315	7,61318
24	7,29655	7,33809	7,37773	7,41563	7,45194	7,48680	7,52030	7,55256	7,58366	7,61367
25	7,29726	7,33876	7,37837	7,41625	7,45254	7,48737	7,52085	7,55309	7,58416	7,61417
26	7,29797	7,33944	7,37902	7,41686	7,45313	7,48794	7,52140	7,55361	7,58467	7,61466
27	7,29867	7,34011	7,37966	7,41748	7,45372	7,48850	7,52194	7,55414	7,58518	7,61515
28	7,29938	7,34079	7,38030	7,41810	7,45431	7,48907	7,52249	7,55467	7,58569	7,61564
29	7,30009	7,34146	7,38095	7,41871	7,45490	7,48964	7,52304	7,55520	7,58620	7,61613
30	7,30079	7,34213	7,38159	7,41933	7,45549	7,49021	7,52358	7,55572	7,58670	7,61662
31	7,30150	7,34281	7,38223	7,41994	7,45608	7,49077	7,52413	7,55624	7,58721	7,61711
32	7,30220	7,34348	7,38288	7,42056	7,45667	7,49134	7,52467	7,55677	7,58772	7,61760
33	7,30291	7,34415	7,38352	7,42117	7,45726	7,49191	7,52522	7,55729	7,58823	7,61809
34	7,30361	7,34482	7,38416	7,42179	7,45785	7,49247	7,52576	7,55781	7,58873	7,61858
35	7,30431	7,34549	7,38480	7,42241	7,45843	7,49304	7,52631	7,55834	7,58924	7,61907
36	7,30502	7,34616	7,38544	7,42302	7,45903	7,49360	7,52685	7,55887	7,58974	7,61955
37	7,30572	7,34683	7,38608	7,42363	7,45962	7,49417	7,52739	7,55939	7,59025	7,62004
38	7,30642	7,34750	7,38672	7,42424	7,46021	7,49473	7,52794	7,55992	7,59075	7,62053
39	7,30712	7,34816	7,38736	7,42485	7,46079	7,49530	7,52848	7,56044	7,59126	7,62102
40	7,30782	7,34883	7,38800	7,42546	7,46138	7,49586	7,52902	7,56096	7,59176	7,62151
41	7,30852	7,34950	7,38863	7,42607	7,46196	7,49642	7,53956	7,56148	7,59226	7,62199
42	7,30922	7,35017	7,38927	7,42668	7,46255	7,49699	7,53011	7,56200	7,59276	7,62248
43	7,30992	7,35084	7,38991	7,42729	7,46313	7,49755	7,53065	7,56253	7,59327	7,62297
44	7,31062	7,35150	7,39054	7,42790	7,46372	7,49811	7,53119	7,56305	7,59378	7,62345
45	7,31131	7,35217	7,39118	7,42851	7,46430	7,49867	7,53173	7,56357	7,59428	7,62394
46	7,31201	7,35283	7,39182	7,42912	7,46489	7,49923	7,53227	7,56409	7,59478	7,62442
47	7,31271	7,35350	7,39245	7,42973	7,46547	7,49979	7,53281	7,56461	7,59529	7,62491
48	7,31340	7,35416	7,39309	7,43034	7,46605	7,50036	7,53335	7,56513	7,59579	7,62540
49	7,31410	7,35482	7,39372	7,43095	7,46664	7,50092	7,53389	7,56565	7,59629	7,62588
50	7,31479	7,35549	7,39435	7,43155	7,46722	7,50148	7,53443	7,56617	7,59679	7,62636
51	7,31549	7,35615	7,39499	7,43216	7,46780	7,50204	7,53497	7,56669	7,59729	7,62685
52	7,31618	7,35681	7,39562	7,43277	7,46838	7,50259	7,53550	7,56721	7,59779	7,62733
53	7,31687	7,35747	7,39625	7,43337	7,46896	7,50315	7,53604	7,56773	7,59829	7,62782
54	7,31757	7,35813	7,39688	7,43398	7,46955	7,50371	7,53658	7,56825	7,59879	7,62830
55	7,31826	7,35879	7,39752	7,43458	7,47013	7,50427	7,53712	7,56876	7,59929	7,62788
56	7,31895	7,35945	7,39815	7,43519	7,47071	7,50483	7,53766	7,56928	7,59979	7,62927
57	7,31964	7,36011	7,39878	7,43579	7,47129	7,50539	7,53819	7,56980	7,60029	7,62975
58	7,32033	7,36077	7,39941	7,43639	7,47187	7,50594	7,53873	7,57032	7,60079	7,63023
59	7,32102	7,36143	7,40004	7,43700	7,47245	7,50650	7,53926	7,57093	7,60129	7,63071
60	7,32171	7,36209	7,40067	7,43760	7,47302	7,50706	7,53980	7,57135	7,60179	7,63120

Log. Sin² $\frac{1}{2}$ t. O¹.

"	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'
0	7.63119.7	7.65963.6	7.68716.9	7.71385.2	7.73973.6	7.76486.7	7.78928.7	7.81303.5	7.83614.7	7.85865.6
1	7.63167.9	7.66010.2	7.68762.1	7.71429.0	7.74016.1	7.76527.9	7.78968.8	7.81342.5	7.83652.7	7.85902.6
2	7.63216.0	7.66056.8	7.68807.2	7.71472.8	7.74058.6	7.76569.2	7.79008.9	7.81381.5	7.83690.7	7.85939.6
3	7.63264.1	7.66103.4	7.68852.3	7.71516.5	7.74101.0	7.76610.4	7.79049.0	7.81420.5	7.83728.6	7.85976.6
4	7.63312.2	7.66149.9	7.68897.4	7.71560.2	7.74143.4	7.76651.6	7.79089.0	7.81459.5	7.83766.6	7.86013.6
5	7.63360.3	7.66196.4	7.68942.4	7.71603.9	7.74185.8	7.76692.8	7.79129.1	7.81498.5	7.83804.5	7.86050.5
6	7.63408.3	7.66242.9	7.68987.5	7.71647.6	7.74228.2	7.76734.0	7.79169.1	7.81537.4	7.83842.4	7.86087.5
7	7.63456.4	7.66289.4	7.69032.5	7.71691.2	7.74270.6	7.76775.1	7.79209.1	7.81576.3	7.83880.3	7.86124.4
8	7.63504.3	7.66335.8	7.69077.5	7.71734.8	7.74312.9	7.76816.3	7.79249.1	7.81615.2	7.83918.2	7.86161.3
9	7.63552.3	7.66382.2	7.69122.4	7.71778.4	7.74355.2	7.76857.4	7.79289.1	7.81654.1	7.83956.1	7.86198.2
10	7.63600.2	7.66428.6	7.69167.4	7.71822.0	7.74397.5	7.76898.5	7.79329.0	7.81693.0	7.83993.9	7.86235.1
11	7.63648.1	7.66475.0	7.69212.3	7.71865.6	7.74439.8	7.76939.6	7.79369.0	7.81731.9	7.84031.8	7.86271.9
12	7.63696.0	7.66521.3	7.69257.2	7.71909.1	7.74482.1	7.76980.6	7.79408.9	7.81770.7	7.84069.6	7.86308.8
13	7.63743.9	7.66567.6	7.69302.1	7.71952.6	7.74524.3	7.77021.7	7.79448.8	7.81809.5	7.84107.4	7.86345.6
14	7.63791.7	7.66613.9	7.69346.9	7.71996.1	7.74566.5	7.77062.7	7.79488.7	7.81848.3	7.84145.2	7.86382.4
15	7.63839.5	7.66660.2	7.69391.7	7.72039.6	7.74608.7	7.77103.7	7.79528.5	7.81887.1	7.84182.9	7.86419.2
16	7.63887.3	7.66706.4	7.69436.5	7.72083.1	7.74650.9	7.77144.6	7.79568.4	7.81925.9	7.84220.7	7.86456.0
17	7.63935.0	7.66752.6	7.69481.3	7.72126.5	7.74693.1	7.77185.6	7.79608.2	7.81964.6	7.84258.4	7.86492.8
18	7.63982.7	7.66798.8	7.69526.1	7.72169.9	7.74735.2	7.77226.5	7.79648.0	7.82003.4	7.84296.1	7.86529.5
19	7.64030.4	7.66845.0	7.69570.8	7.72213.3	7.74777.3	7.77267.5	7.79687.8	7.82042.1	7.84333.8	7.86566.3
20	7.64078.1	7.66891.1	7.69615.5	7.72256.7	7.74819.4	7.77308.4	7.79727.5	7.82080.8	7.84371.5	7.86603.0
21	7.64125.7	7.66937.2	7.69660.2	7.72300.0	7.74861.5	7.77349.2	7.79767.3	7.82119.5	7.84409.2	7.86639.7
22	7.64173.4	7.66983.3	7.69704.9	7.72343.3	7.74903.5	7.77390.1	7.79807.0	7.82158.1	7.84446.9	7.86676.4
23	7.64221.0	7.67029.4	7.69749.5	7.72386.6	7.74945.6	7.77430.9	7.79846.7	7.82196.8	7.84484.5	7.86713.1
24	7.64268.5	7.67075.5	7.69794.1	7.72429.9	7.74987.6	7.77471.8	7.79886.4	7.82235.4	7.84522.1	7.86749.7
25	7.64316.1	7.67121.5	7.69838.7	7.72473.1	7.75029.6	7.77512.6	7.79926.1	7.82274.0	7.84559.7	7.86786.4
26	7.64363.6	7.67167.5	7.69883.3	7.72516.4	7.75071.6	7.77553.4	7.79965.8	7.82312.6	7.84597.3	7.86823.0
27	7.64411.0	7.67213.4	7.69927.8	7.72559.6	7.75113.5	7.77594.1	7.80005.4	7.82351.2	7.84634.9	7.86859.6
28	7.64458.5	7.67259.4	7.69972.4	7.72602.8	7.75155.5	7.77634.8	7.80045.0	7.82389.7	7.84672.4	7.86896.2
29	7.64505.9	7.67305.3	7.70016.9	7.72646.0	7.75197.4	7.77675.6	7.80084.6	7.82428.3	7.84709.9	7.86932.8
30	7.64553.3	7.67351.2	7.70061.4	7.72689.1	7.75239.3	7.77716.3	7.80124.2	7.82466.8	7.84747.5	7.86969.4
31	7.64600.7	7.67397.1	7.70105.8	7.72732.2	7.75281.1	7.77757.0	7.80163.8	7.82505.3	7.84785.0	7.87005.9
32	7.64648.1	7.67442.9	7.70150.2	7.72775.3	7.75323.0	7.77797.7	7.80203.4	7.82543.8	7.84822.5	7.87042.4
33	7.64695.4	7.67488.8	7.70194.6	7.72818.4	7.75364.8	7.77838.3	7.80242.9	7.82582.3	7.84859.9	7.87079.0
34	7.64742.7	7.67534.6	7.70239.0	7.72861.5	7.75406.6	7.77878.9	7.80282.4	7.82620.8	7.84897.4	7.87115.5
35	7.64790.0	7.67580.3	7.70283.4	7.72904.5	7.75448.4	7.77919.5	7.80321.9	7.82659.2	7.84934.8	7.87152.0
36	7.64837.2	7.67626.1	7.70327.8	7.72947.5	7.75490.2	7.77960.1	7.80361.4	7.82697.6	7.84972.3	7.87188.4
37	7.64884.5	7.67671.8	7.70372.1	7.72990.5	7.75531.9	7.78000.7	7.80400.8	7.82736.0	7.85009.7	7.87224.9
38	7.64931.7	7.67717.5	7.70416.4	7.73033.5	7.75573.7	7.78041.3	7.80440.3	7.82774.4	7.85047.0	7.87261.3
39	7.64978.8	7.67763.2	7.70460.7	7.73076.5	7.75615.4	7.78081.8	7.80479.7	7.82812.8	7.85084.4	7.87297.8
40	7.65026.0	7.67808.8	7.70504.9	7.73119.4	7.75657.1	7.78122.3	7.80519.1	7.82851.1	7.85121.8	7.87334.2
41	7.65073.1	7.67854.5	7.70549.1	7.73162.3	7.75698.7	7.78162.8	7.80558.5	7.82889.5	7.85159.1	7.87370.6
42	7.65120.2	7.67900.1	7.70593.3	7.73205.2	7.75740.4	7.78203.3	7.80597.9	7.82927.8	7.85196.4	7.87407.0
43	7.65167.3	7.67945.7	7.70637.5	7.73248.1	7.75782.0	7.78243.7	7.80637.3	7.82966.1	7.85233.8	7.87443.3
44	7.65214.3	7.67991.2	7.70681.7	7.73290.9	7.75823.6	7.78284.2	7.80676.6	7.83004.4	7.85271.1	7.87479.7
45	7.65261.3	7.68036.8	7.70725.8	7.73333.7	7.75865.2	7.78324.6	7.80715.9	7.83042.7	7.85308.3	7.87516.0
46	7.65308.3	7.68082.3	7.70769.9	7.73376.5	7.75906.8	7.78365.0	7.80755.2	7.83080.9	7.85345.6	7.87552.3
47	7.65355.3	7.68127.8	7.70814.0	7.73419.3	7.75948.3	7.78405.4	7.80794.4	7.83119.1	7.85382.8	7.87588.6
48	7.65402.2	7.68173.2	7.70858.1	7.73462.1	7.75989.9	7.78445.8	7.80833.7	7.83157.4	7.85420.1	7.87624.9
49	7.65449.2	7.68218.7	7.70902.2	7.73504.8	7.76031.4	7.78486.1	7.80873.0	7.83195.6	7.85457.3	7.87661.2
50	7.65496.1	7.68264.1	7.70946.2	7.73547.5	7.76072.9	7.78526.4	7.80912.2	7.83233.8	7.85494.5	7.87697.5
51	7.65542.9	7.68309.5	7.70990.2	7.73590.2	7.76114.3	7.78566.7	7.80951.4	7.83271.9	7.85531.7	7.87733.7
52	7.65589.8	7.68354.8	7.71034.2	7.73632.9	7.76155.8	7.78607.0	7.80990.6	7.83310.1	7.85568.8	7.87769.9
53	7.65636.6	7.68400.2	7.71078.1	7.73675.6	7.76197.2	7.78647.3	7.81029.8	7.83348.2	7.85606.0	7.87806.1
54	7.65683.4	7.68445.5	7.71122.1	7.73718.2	7.76238.6	7.78687.5	7.81068.9	7.83386.3	7.85643.1	7.87842.3
55	7.65730.1	7.68490.8	7.71166.0	7.73760.8	7.76280.0	7.78727.8	7.81108.0	7.83424.4	7.85680.2	7.87878.5
56	7.65776.9	7.68536.1	7.71209.9	7.73803.4	7.76321.4	7.78768.0	7.81147.2	7.83462.5	7.85717.3	7.87914.7
57	7.65823.6	7.68581.3	7.71253.7	7.73846.0	7.76362.7	7.78808.2	7.81186.3	7.83500.6	7.85754.4	7.87950.8
58	7.65870.3	7.68626.5	7.71297.6	7.73888.5	7.76404.1	7.78848.4	7.81225.4	7.83538.6	7.85791.5	7.87987.0
59	7.65917.0	7.68671.7	7.71341.4	7.73931.1	7.76445.4	7.78888.5	7.81264.4	7.83576.7	7.85828.5	7.88023.1
60	7.65963.6	7.68716.9	7.71385.2	7.73973.6	7.76486.7	7.78928.7	7.81303.5	7.83614.7	7.85865.6	7.88059.2

"	40'	41'	42'	43'	44'	45'	46'	47'	48'	49'
0	7.88059.2	7.90198.4	7.92285.8	7.94323.7	7.96314.6	7.98260.4	8.00163.2	8.02024.8	8.03846.9	8.05631.2
1	7.88095.3	7.90233.6	7.92320.1	7.94357.3	7.96347.4	7.98292.5	8.00194.6	8.02055.5	8.03877.0	8.05660.6
2	7.88131.4	7.90268.8	7.92354.5	7.94390.8	7.96380.1	7.98324.5	8.00226.0	8.02086.2	8.03907.0	8.05690.0
3	7.88167.4	7.90304.0	7.92388.8	7.94424.4	7.96412.9	7.98356.6	8.00257.3	8.02116.8	8.03937.0	8.05719.4
4	7.88203.4	7.90339.1	7.92423.1	7.94457.9	7.96445.7	7.98388.6	8.00288.6	8.02147.5	8.03967.0	8.05748.8
5	7.88239.5	7.90374.3	7.92457.4	7.94491.4	7.96478.4	7.98420.6	8.00319.9	8.02178.1	8.03997.0	8.05778.2
6	7.88275.5	7.90409.4	7.92491.7	7.94524.9	7.96511.1	7.98452.6	8.00351.2	8.02208.7	8.04027.0	8.05807.6
7	7.88311.5	7.90444.5	7.92526.0	7.94558.4	7.96543.9	7.98484.6	8.00382.5	8.02239.4	8.04057.0	8.05837.0
8	7.88347.5	7.90479.6	7.92560.3	7.94591.8	7.96576.6	7.98516.6	8.00413.7	8.02270.0	8.04087.0	8.05866.3
9	7.88383.5	7.90514.7	7.92594.5	7.94625.3	7.96609.3	7.98548.5	8.00445.0	8.02300.6	8.04116.9	8.05895.7
10	7.88419.4	7.90549.8	7.92628.8	7.94658.7	7.96642.0	7.98580.5	8.00476.3	8.02331.2	8.04146.9	8.05925.0
11	7.88455.4	7.90584.9	7.92663.0	7.94692.2	7.96674.6	7.98612.4	8.00507.5	8.02361.8	8.04176.8	8.05954.3
12	7.88491.3	7.90619.9	7.92697.2	7.94725.6	7.96707.3	7.98644.3	8.00538.8	8.02392.3	8.04206.7	8.05983.6
13	7.88527.2	7.90655.0	7.92731.4	7.94759.0	7.96739.9	7.98676.3	8.00570.0	8.02422.9	8.04236.7	8.06012.9
14	7.88563.1	7.90690.0	7.92765.6	7.94792.4	7.96772.6	7.98708.2	8.00601.2	8.02453.4	8.04266.6	8.06042.2
15	7.88599.0	7.90725.0	7.92799.8	7.94825.8	7.96805.2	7.98740.1	8.00632.4	8.02484.0	8.04296.5	8.06071.5
16	7.88634.9	7.90760.0	7.92833.9	7.94859.1	7.96837.8	7.98771.9	8.00663.6	8.02514.5	8.04326.4	8.06100.8
17	7.88670.7	7.90795.0	7.92868.1	7.94892.5	7.96870.4	7.98803.8	8.00694.7	8.02545.0	8.04356.2	8.06130.1
18	7.88706.6	7.90829.9	7.92902.2	7.94925.8	7.96903.0	7.98835.7	8.00725.9	8.02575.5	8.04386.1	8.06159.3
19	7.88742.4	7.90864.9	7.92936.4	7.94959.2	7.96935.5	7.98867.5	8.00757.1	8.02606.0	8.04416.0	8.06188.6
20	7.88778.2	7.90899.8	7.92970.5	7.94992.5	7.96968.1	7.98899.4	8.00788.2	8.02636.5	8.04445.8	8.06217.8
21	7.88814.0	7.90934.7	7.93004.5	7.95025.8	7.97000.6	7.98931.2	8.00819.4	8.02666.9	8.04475.6	8.06247.0
22	7.88849.7	7.90969.6	7.93038.6	7.95059.1	7.97033.2	7.98963.0	8.00850.5	8.02697.4	8.04505.5	8.06276.3
23	7.88885.5	7.91004.5	7.93072.7	7.95092.3	7.97065.7	7.98994.8	8.00881.6	8.02727.9	8.04535.3	8.06305.5
24	7.88921.3	7.91039.4	7.93106.7	7.95125.6	7.97098.2	7.99026.6	8.00912.7	8.02758.3	8.04565.1	8.06334.6
25	7.88957.0	7.91074.3	7.93140.8	7.95158.9	7.97130.7	7.99058.4	8.00943.8	8.02788.7	8.04594.9	8.06363.8
26	7.88992.7	7.91109.1	7.93174.8	7.95192.1	7.97163.2	7.99090.1	8.00974.8	8.02819.1	8.04624.7	8.06393.0
27	7.89028.4	7.91144.0	7.93208.8	7.95225.3	7.97195.7	7.99121.9	8.01005.9	8.02849.5	8.04654.4	8.06422.2
28	7.89064.1	7.91178.8	7.93242.8	7.95258.5	7.97228.1	7.99153.6	8.01037.0	8.02879.9	8.04684.2	8.06451.3
29	7.89099.8	7.91213.6	7.93276.8	7.95291.7	7.97260.6	7.99185.3	8.01068.0	8.02910.3	8.04713.9	8.06480.5
30	7.89135.4	7.91248.4	7.93310.8	7.95324.9	7.97293.0	7.99217.1	8.01099.0	8.02940.7	8.04743.7	8.06509.6
31	7.89171.1	7.91283.2	7.93344.7	7.95358.1	7.97325.4	7.99248.8	8.01130.1	8.02971.0	8.04773.4	8.06538.7
32	7.89206.7	7.91317.9	7.93378.7	7.95391.2	7.97357.8	7.99280.5	8.01161.1	8.03001.4	8.04803.1	8.06567.9
33	7.89242.3	7.91352.7	7.93412.6	7.95424.4	7.97390.2	7.99312.2	8.01192.1	8.03031.7	8.04832.9	8.06597.0
34	7.89277.9	7.91387.4	7.93446.5	7.95457.5	7.97422.6	7.99343.8	8.01223.0	8.03062.1	8.04862.6	8.06626.1
35	7.89313.5	7.91422.2	7.93480.4	7.95490.7	7.97455.0	7.99375.5	8.01254.0	8.03092.4	8.04892.2	8.06655.2
36	7.89349.1	7.91456.9	7.93514.3	7.95523.8	7.97487.3	7.99407.1	8.01285.0	8.03122.7	8.04921.9	8.06684.2
37	7.89384.6	7.91491.6	7.93548.2	7.95556.9	7.97519.7	7.99438.8	8.01315.9	8.03153.0	8.04951.6	8.06713.3
38	7.89420.2	7.91526.2	7.93582.1	7.95589.9	7.97552.0	7.99470.4	8.01346.9	8.03183.3	8.04981.3	8.06742.4
39	7.89455.7	7.91560.9	7.93615.9	7.95623.0	7.97584.4	7.99502.0	8.01377.8	8.03213.6	8.05010.9	8.06771.4
40	7.89491.2	7.91595.6	7.93649.7	7.95656.1	7.97616.7	7.99533.6	8.01408.7	8.03243.8	8.05040.6	8.06800.4
41	7.89526.7	7.91630.2	7.93683.6	7.95689.1	7.97649.0	7.99565.2	8.01439.6	8.03274.1	8.05070.2	8.06829.5
42	7.89562.2	7.91664.8	7.93717.4	7.95722.1	7.97681.3	7.99596.8	8.01470.5	8.03304.3	8.05099.8	8.06858.5
43	7.89597.7	7.91699.4	7.93751.2	7.95755.2	7.97713.5	7.99628.3	8.01501.4	8.03334.6	8.05129.4	8.06887.5
44	7.89633.1	7.91734.0	7.93785.0	7.95788.2	7.97745.8	7.99659.9	8.01532.3	8.03364.8	8.05159.0	8.06916.5
45	7.89668.5	7.91768.6	7.93818.7	7.95821.2	7.97778.1	7.99691.4	8.01563.2	8.03395.0	8.05188.6	8.06945.5
46	7.89704.0	7.91803.2	7.93852.5	7.95854.1	7.97810.3	7.99723.0	8.01594.0	8.03425.2	8.05218.2	8.06974.5
47	7.89739.4	7.91837.8	7.93886.3	7.95887.1	7.97842.5	7.99754.5	8.01624.9	8.03455.4	8.05247.7	8.07003.4
48	7.89774.8	7.91872.3	7.93920.0	7.95920.1	7.97874.7	7.99786.0	8.01655.7	8.03485.6	8.05277.3	8.07032.4
49	7.89810.2	7.91906.8	7.93953.7	7.95953.0	7.97906.9	7.99817.5	8.01686.5	8.03515.7	8.05306.8	8.07061.4
50	7.89845.5	7.91941.4	7.93987.4	7.95985.9	7.97939.1	7.99849.0	8.01717.3	8.03545.9	8.05336.4	8.07090.3
51	7.89880.9	7.91975.9	7.94021.1	7.96018.9	7.97971.3	7.99880.4	8.01748.1	8.03576.1	8.05365.9	8.07119.2
52	7.89916.2	7.92010.3	7.94054.8	7.96051.8	7.98003.5	7.99911.9	8.01778.9	8.03606.2	8.05395.4	8.07148.1
53	7.89951.5	7.92044.8	7.94088.4	7.96084.7	7.98035.6	7.99943.4	8.01809.7	8.03636.3	8.05424.9	8.07177.0
54	7.89986.8	7.92079.3	7.94122.1	7.96117.6	7.98067.8	7.99974.8	8.01840.4	8.03666.4	8.05454.4	8.07205.9
55	7.90022.1	7.92113.7	7.94155.7	7.96150.4	7.98099.9	8.00006.2	8.01871.2	8.03696.5	8.05483.9	8.07234.8
56	7.90057.4	7.92148.2	7.94189.4	7.96183.3	7.98132.0	8.00037.6	8.01901.9	8.03726.6	8.05513.4	8.07263.7
57	7.90092.7	7.92182.6	7.94223.0	7.96216.1	7.98164.1	8.00069.0	8.01932.7	8.03756.7	8.05542.9	8.07292.6
58	7.90127.9	7.92217.0	7.94256.6	7.96248.9	7.98196.2	8.00100.4	8.01963.4	8.03786.8	8.05572.3	8.07321.5
59	7.90163.2	7.92251.4	7.94290.2	7.96281.8	7.98228.3	8.00131.8	8.01994.1	8.03816.9	8.05601.8	8.07350.3
60	7.90198.4	7.92285.8	7.94323.7	7.96314.6	7.98260.4	8.00163.2	8.02024.8	8.03846.9	8.05631.2	8.07379.2

Log. Sin². $\frac{1}{9}$ t. O⁴.

"	50'	51'	52'	53'	54'	55'	56'	57'	58'	59'
0	8.07379.2	8.09092.2	8.10771.8	8.12419.0	8.14035.2	8.15621.5	8.17178.9	8.18708.5	8.20211.2	8.21687.9
1	8.07408.0	8.09120.5	8.10799.5	8.12446.2	8.14061.9	8.15647.7	8.17204.6	8.18733.7	8.20236.0	8.21712.3
2	8.07436.8	8.09148.7	8.10827.2	8.12473.4	8.14088.6	8.15673.9	8.17230.3	8.18759.0	8.20260.8	8.21736.7
3	8.07465.6	8.09177.0	8.10854.9	8.12500.6	8.14115.2	8.15700.0	8.17256.0	8.18784.2	8.20285.6	8.21761.1
4	8.07494.4	8.09205.2	8.10882.6	8.12527.7	8.14141.9	8.15726.2	8.17281.7	8.18809.5	8.20310.4	8.21785.4
5	8.07523.2	8.09233.4	8.10910.2	8.12554.9	8.14168.5	8.15752.4	8.17307.4	8.18834.7	8.20335.2	8.21809.8
6	8.07552.0	8.09261.6	8.10937.9	8.12582.0	8.14195.2	8.15778.5	8.17333.1	8.18859.9	8.20360.0	8.21834.1
7	8.07580.8	8.09289.9	8.10965.6	8.12609.2	8.14211.8	8.15804.6	8.17358.8	8.18885.1	8.20384.8	8.21858.5
8	8.07609.5	8.09318.1	8.10993.2	8.12636.3	8.14248.4	8.15830.8	8.17384.4	8.18910.4	8.20409.5	8.21882.9
9	8.07638.3	8.09346.3	8.11020.9	8.12663.4	8.14275.0	8.15856.9	8.17410.1	8.18935.6	8.20434.3	8.21907.2
10	8.07667.0	8.09374.4	8.11048.5	8.12690.5	8.14301.6	8.15883.0	8.17435.7	8.18960.8	8.20459.1	8.21931.6
11	8.07695.8	8.09402.6	8.11076.1	8.12717.6	8.14328.2	8.15909.1	8.17461.4	8.18985.9	8.20483.8	8.21955.9
12	8.07724.5	8.09430.8	8.11103.7	8.12744.7	8.14354.8	8.15935.2	8.17487.0	8.19011.1	8.20508.6	8.21980.2
13	8.07753.2	8.09458.9	8.11131.4	8.12771.8	8.14381.4	8.15961.3	8.17512.6	8.19036.3	8.20533.3	8.22004.5
14	8.07781.9	8.09487.1	8.11159.0	8.12798.9	8.14408.0	8.15987.4	8.17538.2	8.19061.5	8.20558.0	8.22028.8
15	8.07810.6	8.09515.2	8.11186.5	8.12825.9	8.14434.6	8.16013.5	8.17563.9	8.19086.6	8.20582.8	8.22053.1
16	8.07839.3	8.09543.3	8.11214.1	8.12853.0	8.14461.1	8.16039.6	8.17589.5	8.19111.8	8.20607.5	8.22077.4
17	8.07868.0	8.09571.4	8.11241.7	8.12880.0	8.14487.7	8.16065.6	8.17615.1	8.19136.9	8.20632.2	8.22101.7
18	8.07896.7	8.09599.5	8.11269.3	8.12907.1	8.14514.2	8.16091.7	8.17640.6	8.19162.1	8.20656.9	8.22126.0
19	8.07925.3	8.09627.6	8.11296.8	8.12934.1	8.14540.7	8.16117.7	8.17666.2	8.19187.2	8.20681.6	8.22150.3
20	8.07954.0	8.09655.7	8.11324.4	8.12961.1	8.14567.2	8.16143.8	8.17691.8	8.19212.3	8.20706.2	8.22174.5
21	8.07982.6	8.09683.8	8.11351.9	8.12988.2	8.14593.8	8.16169.8	8.17717.4	8.19237.4	8.20730.9	8.22198.8
22	8.08011.3	8.09711.9	8.11379.4	8.13015.2	8.14620.3	8.16195.8	8.17742.9	8.19262.5	8.20755.6	8.22223.0
23	8.08039.9	8.09739.9	8.11407.0	8.13042.2	8.14646.8	8.16221.9	8.17768.5	8.19287.6	8.20780.3	8.22247.3
24	8.08068.5	8.09768.0	8.11434.5	8.13069.2	8.14673.3	8.16247.9	8.17794.0	8.19312.7	8.20804.9	8.22271.5
25	8.08097.1	8.09796.0	8.11462.0	8.13096.1	8.14699.7	8.16273.9	8.17819.5	8.19337.8	8.20829.6	8.22295.8
26	8.08125.7	8.09824.1	8.11489.5	8.13123.1	8.14726.2	8.16299.8	8.17845.1	8.19362.9	8.20854.2	8.22320.0
27	8.08154.3	8.09852.1	8.11516.9	8.13150.1	8.14752.7	8.16325.8	8.17870.6	8.19388.0	8.20878.9	8.22344.2
28	8.08182.8	8.09880.1	8.11544.4	8.13177.0	8.14779.1	8.16351.8	8.17896.1	8.19413.0	8.20903.5	8.22368.4
29	8.08211.4	8.09908.1	8.11571.9	8.13204.0	8.14805.6	8.16377.8	8.17921.6	8.19438.1	8.20928.1	8.22392.6
30	8.08240.0	8.09936.1	8.11599.3	8.13230.9	8.14832.0	8.16403.7	8.17947.1	8.19463.1	8.20952.7	8.22416.8
31	8.08268.5	8.09964.1	8.11626.8	8.13257.9	8.14858.5	8.16429.7	8.17972.6	8.19488.2	8.20977.3	8.22441.0
32	8.08297.0	8.09992.1	8.11654.2	8.13284.8	8.14884.9	8.16455.6	8.17998.1	8.19513.2	8.21001.9	8.22465.2
33	8.08325.6	8.10020.0	8.11681.7	8.13311.7	8.14911.3	8.16481.6	8.18023.5	8.19538.2	8.21026.5	8.22489.4
34	8.08354.1	8.10048.0	8.11709.1	8.13338.6	8.14937.7	8.16507.5	8.18049.0	8.19563.2	8.21051.1	8.22513.5
35	8.08382.6	8.10075.9	8.11736.5	8.13365.5	8.14964.1	8.16533.4	8.18074.5	8.19588.2	8.21075.7	8.22537.7
36	8.08411.1	8.10103.9	8.11763.9	8.13392.4	8.14990.5	8.16559.3	8.18099.9	8.19613.2	8.21100.3	8.22561.8
37	8.08439.6	8.10131.8	8.11791.3	8.13419.3	8.15016.9	8.16585.2	8.18125.4	8.19638.2	8.21124.8	8.22586.0
38	8.08468.1	8.10159.7	8.11818.7	8.13446.1	8.15043.3	8.16611.1	8.18150.8	8.19663.2	8.21149.4	8.22610.1
39	8.08496.5	8.10187.7	8.11846.1	8.13473.0	8.15069.6	8.16637.0	8.18176.2	8.19688.2	8.21173.9	8.22634.3
40	8.08525.0	8.10215.6	8.11873.4	8.13499.9	8.15096.0	8.16662.9	8.18201.6	8.19713.2	8.21198.5	8.22658.4
41	8.08553.4	8.10243.5	8.11900.8	8.13526.7	8.15122.3	8.16688.8	8.18227.1	8.19738.2	8.21223.0	8.22682.5
42	8.08581.9	8.10271.3	8.11928.2	8.13553.5	8.15148.7	8.16714.6	8.18252.5	8.19763.1	8.21247.5	8.22706.6
43	8.08610.3	8.10299.2	8.11955.5	8.13580.4	8.15175.0	8.16740.5	8.18277.9	8.19788.1	8.21272.1	8.22730.7
44	8.08638.7	8.10327.1	8.11982.8	8.13607.2	8.15201.3	8.16766.3	8.18303.2	8.19813.0	8.21296.6	8.22754.8
45	8.08667.2	8.10354.9	8.12010.2	8.13634.0	8.15227.7	8.16792.2	8.18328.6	8.19838.0	8.21321.1	8.22778.9
46	8.08695.6	8.10382.8	8.12037.5	8.13660.8	8.15254.0	8.16818.0	8.18354.0	8.19862.9	8.21345.6	8.22803.0
47	8.08724.0	8.10410.6	8.12064.8	8.13687.6	8.15280.3	8.16843.9	8.18379.4	8.19887.8	8.21370.1	8.22827.1
48	8.08752.3	8.10438.5	8.12192.1	8.13714.4	8.15306.6	8.16869.7	8.18404.7	8.19912.7	8.21394.6	8.22851.2
49	8.08780.7	8.10466.3	8.12219.4	8.13741.2	8.15332.9	8.16895.5	8.18430.1	8.19937.6	8.21419.1	8.22875.2
50	8.08809.1	8.10494.1	8.12246.7	8.13768.0	8.15359.1	8.16921.3	8.18455.4	8.19962.5	8.21443.5	8.22899.3
51	8.08837.4	8.10521.9	8.12273.9	8.13794.7	8.15385.4	8.16947.1	8.18480.8	8.19987.4	8.21468.0	8.22923.4
52	8.08865.8	8.10549.7	8.12201.2	8.13821.5	8.15411.7	8.16972.9	8.18506.1	8.20012.3	8.21492.5	8.22947.4
53	8.08894.1	8.10577.5	8.12228.5	8.13848.2	8.15437.9	8.16998.7	8.18531.4	8.20037.2	8.21516.9	8.22971.4
54	8.08922.4	8.10605.3	8.12255.7	8.13875.0	8.15464.2	8.17024.4	8.18556.7	8.20062.1	8.21541.4	8.22995.5
55	8.08950.8	8.10633.0	8.12283.0	8.13901.7	8.15490.4	8.17050.2	8.18582.0	8.20086.9	8.21565.8	8.23019.5
56	8.08979.1	8.10660.8	8.12310.2	8.13928.4	8.15516.6	8.17075.9	8.18607.3	8.20111.8	8.21590.2	8.23043.5
57	8.09007.4	8.10688.6	8.12337.4	8.13955.1	8.15542.9	8.17101.7	8.18632.6	8.20136.7	8.21614.7	8.23067.5
58	8.09035.7	8.10716.3	8.12364.6	8.13981.8	8.15569.1	8.17127.4	8.18657.9	8.20161.5	8.21639.1	8.23091.5
59	8.09064.0	8.10744.0	8.12391.8	8.14008.5	8.15595.3	8.17153.2	8.18683.2	8.20186.3	8.21663.5	8.23115.5
60	8.09092.2	8.10771.8	8.12419.0	8.14035.2	8.15621.5	8.17178.9	8.18708.5	8.20211.2	8.21687.9	8.23139.5

"	0'	1'	2'	3'	4'	5'	6'	7'	8'	9'
	23.8	23.4	23.0	22.7	22.3	22.0	21.6	21.3	21.0	20.7
0	8.23139.5	8.24566.9	8.25970.8	8.27351.9	8.28711.1	8.30048.8	8.31365.9	8.32662.9	8.33940.4	8.35199.0
1	8.23163.5	8.24590.5	8.25994.0	8.27374.8	8.28733.5	8.30070.9	8.31387.7	8.32684.4	8.33961.5	8.35219.8
2	8.23187.5	8.24614.1	8.26017.2	8.27397.6	8.28756.0	8.30093.1	8.31409.5	8.32705.8	8.33982.7	8.35240.6
3	8.23211.5	8.24637.6	8.26040.4	8.27420.4	8.28778.4	8.30115.2	8.31431.2	8.32727.2	8.34003.8	8.35261.4
4	8.23235.4	8.24661.2	8.26063.6	8.27443.2	8.28800.9	8.30137.3	8.31453.0	8.32748.7	8.34024.9	8.35282.2
5	8.23259.4	8.24684.8	8.26086.7	8.27466.0	8.28823.3	8.30159.4	8.31474.7	8.32770.1	8.34046.0	8.35303.0
6	8.23283.3	8.24708.3	8.26109.9	8.27488.8	8.28845.8	8.30181.4	8.31496.5	8.32791.5	8.34067.1	8.35323.8
7	8.23307.3	8.24731.9	8.26133.1	8.27511.6	8.28868.2	8.30203.5	8.31518.2	8.32812.9	8.34088.2	8.35344.6
8	8.23331.2	8.24755.4	8.26156.2	8.27534.4	8.28890.6	8.30225.6	8.31540.0	8.32834.4	8.34109.3	8.35365.4
9	8.23355.2	8.24778.9	8.26179.4	8.27557.2	8.28913.0	8.30247.7	8.31561.7	8.32855.8	8.34130.4	8.35386.2
10	8.23379.1	8.24802.5	8.26202.5	8.27580.0	8.28935.5	8.30269.7	8.31583.4	8.32877.2	8.34151.5	8.35406.9
11	8.23403.0	8.24826.0	8.26225.7	8.27602.7	8.28957.9	8.30291.8	8.31605.2	8.32898.6	8.34172.5	8.35427.7
12	8.23426.9	8.24849.5	8.26248.8	8.27625.5	8.28980.3	8.30313.9	8.31626.9	8.32920.0	8.34193.6	8.35448.5
13	8.23450.8	8.24873.0	8.26271.9	8.27648.2	8.29002.7	8.30335.9	8.31648.6	8.32941.4	8.34214.7	8.35469.2
14	8.23474.7	8.24896.5	8.26295.0	8.27671.0	8.29025.1	8.30358.0	8.31670.3	8.32962.8	8.34235.7	8.35490.0
15	8.23498.6	8.24920.0	8.26318.2	8.27693.7	8.29047.5	8.30380.0	8.31692.0	8.32984.2	8.34256.8	8.35510.7
16	8.23522.5	8.24943.5	8.26341.3	8.27716.5	8.29069.9	8.30402.1	8.31713.7	8.33005.5	8.34277.9	8.35531.5
17	8.23546.4	8.24967.0	8.26364.4	8.27739.2	8.29092.2	8.30424.1	8.31735.4	8.33026.8	8.34298.9	8.35552.2
18	8.23570.2	8.24990.5	8.26387.5	8.27761.9	8.29114.6	8.30446.1	8.31757.1	8.33048.2	8.34319.9	8.35573.0
19	8.23594.1	8.25014.0	8.26410.6	8.27784.7	8.29136.9	8.30468.1	8.31778.8	8.33069.5	8.34341.0	8.35593.7
20	8.23618.0	8.25037.4	8.26433.7	8.27807.4	8.29159.3	8.30490.1	8.31800.4	8.33090.9	8.34362.0	8.35614.4
21	8.23641.8	8.25060.9	8.26456.7	8.27830.1	8.29181.7	8.30512.1	8.31822.1	8.33112.2	8.34383.0	8.35635.1
22	8.23665.7	8.25084.3	8.26479.8	8.27852.8	8.29204.0	8.30534.1	8.31843.8	8.33133.5	8.34404.1	8.35655.8
23	8.23689.5	8.25107.8	8.26502.9	8.27875.5	8.29226.3	8.30556.1	8.31865.4	8.33154.9	8.34425.1	8.35676.5
24	8.23713.3	8.25131.2	8.26525.9	8.27898.2	8.29248.7	8.30578.1	8.31887.1	8.33176.2	8.34446.1	8.35697.3
25	8.23737.2	8.25154.7	8.26549.0	8.27920.9	8.29271.0	8.30600.1	8.31908.7	8.33197.5	8.34467.1	8.35717.9
26	8.23761.0	8.25178.1	8.26572.0	8.27943.5	8.29293.3	8.30622.1	8.31930.4	8.33218.8	8.34488.1	8.35738.6
27	8.23784.8	8.25201.5	8.26595.1	8.27966.2	8.29315.7	8.30644.0	8.31952.0	8.33240.2	8.34509.1	8.35759.3
28	8.23808.6	8.25224.9	8.26618.1	8.27988.9	8.29338.0	8.30666.0	8.31973.6	8.33261.5	8.34530.1	8.35780.0
29	8.23832.4	8.25248.3	8.26641.1	8.28011.5	8.29360.3	8.30688.0	8.31995.2	8.33282.8	8.34551.0	8.35800.7
30	8.23856.2	8.25271.7	8.26664.1	8.28034.2	8.29382.6	8.30709.9	8.32016.9	8.33304.1	8.34572.0	8.35821.4
31	8.23880.0	8.25295.1	8.26687.2	8.28056.8	8.29404.9	8.30731.9	8.32038.5	8.33325.3	8.34593.0	8.35842.0
32	8.23903.8	8.25318.5	8.26710.2	8.28079.5	8.29427.2	8.30753.8	8.32060.1	8.33346.6	8.34614.0	8.35862.7
33	8.23927.5	8.25341.9	8.26733.2	8.28102.1	8.29449.4	8.30775.7	8.32081.7	8.33367.9	8.34634.9	8.35883.3
34	8.23951.3	8.25365.3	8.26756.2	8.28124.8	8.29471.7	8.30797.7	8.32103.3	8.33389.2	8.34655.9	8.35904.0
35	8.23975.0	8.25388.6	8.26779.2	8.28147.4	8.29494.0	8.30819.6	8.32124.9	8.33410.4	8.34676.8	8.35924.6
36	8.23998.8	8.25412.0	8.26802.2	8.28170.0	8.29516.2	8.30841.5	8.32146.5	8.33431.7	8.34697.8	8.35945.3
37	8.24022.5	8.25435.3	8.26825.1	8.28192.6	8.29538.5	8.30863.4	8.32168.0	8.33453.0	8.34718.7	8.35965.9
38	8.24046.3	8.25458.7	8.26848.1	8.28215.2	8.29560.7	8.30885.3	8.32189.6	8.33474.2	8.34739.7	8.35986.5
39	8.24070.0	8.25482.0	8.26871.1	8.28237.8	8.29583.0	8.30907.2	8.32211.2	8.33495.5	8.34760.6	8.36007.2
40	8.24093.8	8.25505.4	8.26894.0	8.28260.4	8.29605.2	8.30929.1	8.32232.8	8.33516.7	8.34781.5	8.36027.8
41	8.24117.5	8.25528.7	8.26917.0	8.28283.0	8.29627.5	8.30951.0	8.32254.3	8.33537.9	8.34802.4	8.36048.4
42	8.24141.2	8.25552.0	8.26939.9	8.28305.6	8.29649.7	8.30972.9	8.32275.9	8.33559.2	8.34823.4	8.36069.0
43	8.24164.9	8.25575.3	8.26962.9	8.28328.2	8.29671.9	8.30994.8	8.32297.4	8.33580.4	8.34844.3	8.36089.6
44	8.24188.6	8.25598.7	8.26985.8	8.28350.7	8.29694.1	8.31016.7	8.32319.0	8.33601.6	8.34865.2	8.36110.2
45	8.24212.3	8.25622.0	8.27008.7	8.28373.3	8.29716.3	8.31038.5	8.32340.5	8.33622.8	8.34886.1	8.36130.8
46	8.24236.0	8.25645.3	8.27031.7	8.28395.8	8.29738.5	8.31060.4	8.32362.0	8.33644.0	8.34907.0	8.36151.4
47	8.24259.6	8.25668.6	8.27054.6	8.28418.4	8.29760.7	8.31082.3	8.32383.5	8.33665.2	8.34927.9	8.36172.0
48	8.24283.3	8.25691.9	8.27077.5	8.28441.0	8.29782.9	8.31104.1	8.32405.1	8.33686.4	8.34948.8	8.36192.6
49	8.24306.9	8.25715.1	8.27100.4	8.28463.5	8.29805.1	8.31126.0	8.32426.6	8.33707.6	8.34969.6	8.36213.2
50	8.24330.6	8.25738.4	8.27123.3	8.28486.0	8.29827.3	8.31147.8	8.32448.1	8.33728.8	8.34990.5	8.36233.7
51	8.24354.3	8.25761.7	8.27146.2	8.28508.6	8.29849.5	8.31169.6	8.32469.6	8.33750.0	8.35011.4	8.36254.3
52	8.24378.0	8.25784.9	8.27169.1	8.28531.1	8.29871.7	8.31191.5	8.32491.1	8.33771.2	8.35032.3	8.36274.9
53	8.24401.6	8.25808.2	8.27191.9	8.28553.6	8.29893.8	8.31213.3	8.32512.6	8.33792.3	8.35053.1	8.36295.4
54	8.24425.2	8.25831.4	8.27214.8	8.28576.1	8.29916.0	8.31235.1	8.32534.1	8.33813.5	8.35074.0	8.36316.0
55	8.24448.8	8.25854.7	8.27237.7	8.28598.6	8.29938.1	8.31256.9	8.32555.6	8.33834.7	8.35094.8	8.36336.5
56	8.24472.5	8.25877.9	8.27260.6	8.28621.1	8.29960.3	8.31278.7	8.32577.1	8.33855.8	8.35115.7	8.36357.1
57	8.24496.1	8.25901.1	8.27283.4	8.28643.6	8.29982.4	8.31300.5	8.32598.5	8.33877.0	8.35136.5	8.36377.6
58	8.24519.7	8.25924.3	8.27306.2	8.28666.1	8.30004.6	8.31322.3	8.32620.0	8.33898.1	8.35157.3	8.36398.1
59	8.24543.3	8.25947.6	8.27329.1	8.28688.6	8.30026.7	8.31344.1	8.32641.4	8.33919.3	8.35178.2	8.36418.7
60	8.24566.9	8.25970.8	8.27351.9	8.28711.1	8.30048.8	8.31365.9	8.32662.9	8.33940.4	8.35199.0	8.36439.2

Log. Sin²¹. t. I¹.

<i>n</i>	10' 20.4	11' 20.1	12' 19.8	13' 19.5	14' 19.3	15' 19.0	16' 18.7	17' 18.5	18' 18.3	19' 18.0
0	8.36439.2	8.37661.5	8.38866.5	8.40054.6	8.41226.2	8.42381.8	8.43521.8	8.44646.7	8.45756.8	8.46852.4
1	8.36459.7	8.37681.7	8.38886.4	8.40074.2	8.41245.6	8.42400.9	8.43540.7	8.44665.3	8.45775.1	8.46870.6
2	8.36480.2	8.37702.0	8.38906.3	8.40093.9	8.41264.9	8.42420.0	8.43559.6	8.44683.9	8.45793.5	8.46888.7
3	8.36500.7	8.37722.2	8.38926.3	8.40113.5	8.41284.3	8.42439.2	8.43578.4	8.44702.6	8.45811.9	8.46906.8
4	8.36521.2	8.37742.4	8.38946.2	8.40133.2	8.41303.7	8.42458.3	8.43597.3	8.44721.2	8.45830.3	8.46925.0
5	8.36541.7	8.37762.6	8.38966.1	8.40152.8	8.41323.1	8.42477.4	8.43616.1	8.44739.8	8.45848.6	8.46943.1
6	8.36562.2	8.37782.8	8.38986.0	8.40172.4	8.41342.4	8.42496.5	8.43635.0	8.44758.4	8.45867.0	8.46961.2
7	8.36582.7	8.37803.0	8.39005.9	8.40192.1	8.41361.8	8.42515.6	8.43653.8	8.44777.0	8.45885.3	8.46979.3
8	8.36603.2	8.37823.2	8.39025.8	8.40211.7	8.41381.2	8.42534.7	8.43672.7	8.44795.6	8.45903.7	8.46997.5
9	8.36623.7	8.37843.4	8.39045.7	8.40231.3	8.41400.5	8.42553.8	8.43691.5	8.44814.1	8.45922.0	8.47015.6
10	8.36644.1	8.37863.5	8.39065.6	8.40250.9	8.41419.9	8.42572.9	8.43710.4	8.44832.7	8.45940.4	8.47033.7
11	8.36664.6	8.37883.7	8.39085.5	8.40270.6	8.41439.2	8.42591.9	8.43729.2	8.44851.3	8.45958.7	8.47051.8
12	8.36685.1	8.37903.9	8.39105.4	8.40290.2	8.41458.6	8.42611.0	8.43748.0	8.44869.9	8.45977.1	8.47069.9
13	8.36705.5	8.37924.0	8.39125.3	8.40309.8	8.41477.9	8.42630.1	8.43765.8	8.44888.5	8.45995.4	8.47088.0
14	8.36726.0	8.37944.2	8.39145.2	8.40329.4	8.41497.2	8.42649.2	8.43786.6	8.44907.0	8.46013.7	8.47106.1
15	8.36746.4	8.37964.4	8.39165.1	8.40349.0	8.41516.6	8.42668.2	8.43804.5	8.44925.6	8.46032.0	8.47124.1
16	8.36766.9	8.37984.5	8.39184.9	8.40368.6	8.41535.9	8.42687.3	8.43823.3	8.44944.2	8.46050.4	8.47142.2
17	8.36787.3	8.38004.7	8.39204.8	8.40388.2	8.41555.2	8.42706.4	8.43842.1	8.44962.7	8.46068.7	8.47160.3
18	8.36807.7	8.38024.8	8.39224.6	8.40407.7	8.41574.5	8.42725.4	8.43860.9	8.44981.3	8.46097.0	8.47178.4
19	8.36828.2	8.38044.9	8.39244.5	8.40427.3	8.41593.8	8.42744.5	8.43879.7	8.44999.8	8.46105.3	8.47196.4
20	8.36848.6	8.38065.1	8.39264.4	8.40446.9	8.41613.1	8.42763.5	8.43898.5	8.45018.4	8.46123.6	8.47214.5
21	8.36869.0	8.38085.2	8.39284.2	8.40466.5	8.41632.4	8.42782.5	8.43917.2	8.45036.9	8.46141.9	8.47232.6
22	8.36889.4	8.38105.3	8.39304.0	8.40486.0	8.41651.7	8.42801.6	8.43936.0	8.45055.4	8.46160.2	8.47250.6
23	8.36909.8	8.38125.4	8.39323.9	8.40505.6	8.41671.0	8.42820.6	8.43954.8	8.45074.0	8.46178.5	8.47268.7
24	8.36930.2	8.38145.5	8.39343.7	8.40525.2	8.41690.3	8.42839.7	8.43973.6	8.45092.5	8.46196.8	8.47286.8
25	8.36950.6	8.38165.7	8.39363.5	8.40544.7	8.41709.6	8.42858.7	8.43992.4	8.45111.0	8.46215.0	8.47304.8
26	8.36971.0	8.38185.8	8.39383.4	8.40564.2	8.41728.9	8.42877.7	8.44011.1	8.45129.5	8.46233.3	8.47322.8
27	8.36991.4	8.38205.9	8.39403.2	8.40583.8	8.41748.2	8.42896.7	8.44029.9	8.45148.0	8.46251.6	8.47340.9
28	8.37011.8	8.38226.0	8.39423.0	8.40603.3	8.41767.4	8.42915.7	8.44048.6	8.45166.6	8.46269.9	8.47358.9
29	8.37032.2	8.38246.1	8.39442.8	8.40622.9	8.41786.7	8.42934.7	8.44067.4	8.45185.1	8.46288.1	8.47376.9
30	8.37052.6	8.38266.1	8.39462.6	8.40642.4	8.41806.0	8.42953.7	8.44086.1	8.45203.6	8.46306.4	8.47395.0
31	8.37072.9	8.38286.2	8.39482.4	8.40661.9	8.41825.2	8.42972.7	8.44104.9	8.45222.1	8.46324.6	8.47413.0
32	8.37093.3	8.38306.3	8.39502.2	8.40681.4	8.41844.5	8.42991.7	8.44123.6	8.45240.6	8.46342.9	8.47431.0
33	8.37113.6	8.38326.4	8.39522.0	8.40700.9	8.41863.7	8.43010.7	8.44142.4	8.45259.0	8.46361.1	8.47449.0
34	8.37134.0	8.38346.4	8.39541.8	8.40720.5	8.41883.0	8.43029.7	8.44161.1	8.45277.5	8.46379.4	8.47467.0
35	8.37154.3	8.38366.5	8.39561.5	8.40740.0	8.41902.2	8.43048.7	8.44179.8	8.45296.0	8.46397.6	8.47485.0
36	8.37174.7	8.38386.6	8.39581.3	8.40759.5	8.41921.4	8.43067.7	8.44198.6	8.45314.5	8.46415.9	8.47503.1
37	8.37195.0	8.38406.6	8.39601.1	8.40779.0	8.41940.7	8.43086.6	8.44217.3	8.45333.0	8.46434.1	8.47521.1
38	8.37215.4	8.38426.6	8.39620.8	8.40798.5	8.41959.9	8.43105.6	8.44236.0	8.45351.4	8.46452.3	8.47539.1
39	8.37235.7	8.38446.7	8.39640.6	8.40817.9	8.41979.1	8.43124.6	8.44254.7	8.45369.9	8.46470.6	8.47557.1
40	8.37256.0	8.38466.7	8.39660.4	8.40837.4	8.41998.3	8.43143.5	8.44273.4	8.45388.4	8.46488.8	8.47575.1
41	8.37276.3	8.38486.7	8.39680.1	8.40856.9	8.42017.5	8.43162.5	8.44292.1	8.45406.8	8.46507.0	8.47593.0
42	8.37296.7	8.38506.8	8.39699.9	8.40876.4	8.42036.8	8.43181.4	8.44310.8	8.45425.3	8.46525.2	8.47611.0
43	8.37317.0	8.38526.8	8.39719.6	8.40895.8	8.42056.0	8.43200.4	8.44329.5	8.45443.7	8.46543.4	8.47629.0
44	8.37337.3	8.38546.8	8.39739.4	8.40915.3	8.42075.2	8.43219.3	8.44348.2	8.45462.2	8.46561.6	8.47647.0
45	8.37357.6	8.38566.8	8.39759.1	8.40934.8	8.42094.4	8.43238.3	8.44366.9	8.45480.6	8.46579.8	8.47664.9
46	8.37377.9	8.38586.8	8.39778.8	8.40954.3	8.42113.6	8.43257.2	8.44385.6	8.45499.1	8.46598.0	8.47682.9
47	8.37398.2	8.38606.8	8.39798.5	8.40973.7	8.42132.8	8.43276.1	8.44404.2	8.45517.5	8.46616.2	8.47700.9
48	8.37418.5	8.38626.8	8.39818.3	8.40993.1	8.42152.0	8.43295.1	8.44422.9	8.45535.9	8.46634.4	8.47718.8
49	8.37438.7	8.38646.8	8.39838.0	8.41012.6	8.42171.2	8.43314.0	8.44441.6	8.45554.4	8.46652.6	8.47736.8
50	8.37459.0	8.38666.8	8.39857.7	8.41032.0	8.42190.4	8.43332.9	8.44460.3	8.45572.8	8.46670.8	8.47754.7
51	8.37479.3	8.38686.8	8.39877.4	8.41051.5	8.42209.5	8.43351.8	8.44479.0	8.45591.2	8.46689.0	8.47772.7
52	8.37499.6	8.38706.8	8.39897.1	8.41070.9	8.42228.6	8.43370.7	8.44497.6	8.45609.6	8.46707.2	8.47790.6
53	8.37519.8	8.38726.8	8.39916.8	8.41090.3	8.42247.8	8.43389.6	8.44516.2	8.45628.0	8.46725.3	8.47808.6
54	8.37540.1	8.38746.7	8.39936.5	8.41109.7	8.42266.9	8.43408.5	8.44534.9	8.45646.4	8.46743.5	8.47826.5
55	8.37560.3	8.38766.7	8.39956.2	8.41129.2	8.42286.1	8.43427.4	8.44553.5	8.45664.8	8.46761.7	8.47844.4
56	8.37580.6	8.38786.7	8.39975.9	8.41148.6	8.42305.3	8.43446.3	8.44572.2	8.45683.2	8.46779.8	8.47862.4
57	8.37600.8	8.38806.6	8.39995.5	8.41168.0	8.42324.4	8.43465.2	8.44590.8	8.45701.6	8.46798.0	8.47880.3
58	8.37621.0	8.38826.6	8.40015.2	8.41187.4	8.42343.5	8.43484.1	8.44609.4	8.45720.0	8.46816.1	8.47898.2
59	8.37641.3	8.38846.5	8.40034.9	8.41206.8	8.42362.7	8.43503.0	8.44628.1	8.45738.4	8.46834.3	8.47916.1
60	8.37661.5	8.38866.5	8.40054.6	8.41226.2	8.42381.8	8.43521.8	8.44646.7	8.45756.8	8.46852.4	8.47934.0

"	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'
	17.8	17.6	17.4	17.1	16.9	16.7	16.5	16.3	16.2	16.0
0	8.47934.0	8.49001.9	8.50056.4	8.51097.9	8.52126.6	8.53142.9	8.54147.0	8.55139.2	8.56119.8	8.57089.0
1	8.47951.9	8.49019.6	8.50073.9	8.51115.1	8.52143.6	8.53159.7	8.54163.6	8.55155.6	8.56136.0	8.57105.0
2	8.47969.8	8.49037.3	8.50091.4	8.51132.4	8.52160.7	8.53176.5	8.54180.2	8.55172.0	8.56152.2	8.57121.1
3	8.47987.7	8.49055.0	8.50108.8	8.51149.6	8.52177.7	8.53193.3	8.54196.8	8.55188.5	8.56168.5	8.57137.2
4	8.48005.6	8.49072.6	8.50126.3	8.51166.9	8.52194.7	8.53210.1	8.54213.5	8.55204.9	8.56184.7	8.57153.2
5	8.48023.5	8.49090.3	8.50143.7	8.51184.1	8.52211.8	8.53227.0	8.54230.1	8.55221.3	8.56201.0	8.57169.3
6	8.48041.4	8.49108.0	8.50161.2	8.51201.3	8.52228.8	8.53243.8	8.54246.7	8.55237.7	8.56217.2	8.57185.3
7	8.48059.3	8.49125.6	8.50178.6	8.51218.6	8.52245.8	8.53260.6	8.54263.3	8.55254.2	8.56233.4	8.57201.3
8	8.48077.2	8.49143.3	8.50196.1	8.51235.8	8.52262.8	8.53277.4	8.54279.9	8.55270.6	8.56249.7	8.57217.4
9	8.48095.1	8.49160.9	8.50213.5	8.51253.0	8.52279.8	8.53294.2	8.54296.5	8.55287.0	8.56265.9	8.57233.4
10	8.48113.0	8.49178.6	8.50230.9	8.51270.2	8.52296.8	8.53311.0	8.54313.1	8.55303.4	8.56282.1	8.57249.5
11	8.48130.8	8.49186.2	8.50248.3	8.51287.4	8.52313.8	8.53327.8	8.54329.7	8.55319.8	8.56298.3	8.57265.5
12	8.48148.7	8.49213.9	8.50265.8	8.51304.7	8.52330.8	8.53344.6	8.54346.3	8.55336.2	8.56314.5	8.57281.5
13	8.48166.6	8.49231.5	8.50283.2	8.51321.9	8.52347.8	8.53361.4	8.54362.9	8.55352.6	8.56330.7	8.57297.5
14	8.48184.4	8.49249.2	8.50300.6	8.51339.1	8.52364.8	8.53378.2	8.54379.5	8.55369.0	8.56346.9	8.57313.5
15	8.48202.3	8.49266.8	8.50318.0	8.51356.3	8.52381.8	8.53395.0	8.54396.1	8.55385.4	8.56363.1	8.57329.6
16	8.48220.1	8.49284.4	8.50335.4	8.51373.5	8.52398.8	8.53411.8	8.54412.7	8.55401.8	8.56379.3	8.57345.6
17	8.48238.0	8.49302.1	8.50352.8	8.51390.6	8.52415.8	8.53428.6	8.54429.3	8.55418.2	8.56395.5	8.57361.6
18	8.48255.8	8.49319.7	8.50370.2	8.51407.8	8.52432.8	8.53446.3	8.54445.8	8.55434.5	8.56411.7	8.57377.6
19	8.48273.7	8.49337.3	8.50387.6	8.51425.0	8.52449.7	8.53462.1	8.54462.4	8.55450.9	8.56427.9	8.57393.6
20	8.48291.5	8.49354.9	8.50405.0	8.51442.2	8.52466.7	8.53478.9	8.54479.0	8.55467.3	8.56444.1	8.57409.6
21	8.48309.3	8.49372.5	8.50422.4	8.51459.4	8.52483.7	8.53495.7	8.54495.6	8.55483.7	8.56460.3	8.57425.6
22	8.48327.2	8.49390.1	8.50439.8	8.51476.5	8.52500.6	8.53512.4	8.54512.1	8.55500.1	8.56476.5	8.57441.6
23	8.48345.0	8.49407.7	8.50457.2	8.51493.7	8.52517.6	8.53529.2	8.54528.7	8.55516.4	8.56492.6	8.57457.6
24	8.48362.8	8.49425.3	8.50474.6	8.51510.9	8.52534.6	8.53545.9	8.54545.3	8.55532.8	8.56508.8	8.57473.6
25	8.48380.6	8.49442.9	8.50491.9	8.51528.1	8.52551.5	8.53562.7	8.54561.8	8.55549.1	8.56525.0	8.57489.6
26	8.48398.4	8.49460.5	8.50509.3	8.51545.2	8.52568.5	8.53579.4	8.54578.4	8.55565.5	8.56541.1	8.57505.5
27	8.48416.3	8.49478.1	8.50526.7	8.51562.4	8.52585.4	8.53596.2	8.54594.9	8.55581.9	8.56557.3	8.57521.5
28	8.48434.1	8.49495.7	8.50544.1	8.51579.5	8.52602.4	8.53612.9	8.54611.5	8.55598.2	8.56573.5	8.57537.5
29	8.48451.9	8.49513.2	8.50561.4	8.51596.7	8.52619.3	8.53629.7	8.54628.0	8.55614.6	8.56589.6	8.57553.5
30	8.48469.7	8.49530.8	8.50578.8	8.51613.8	8.52636.3	8.53646.4	8.54644.5	8.55630.9	8.56605.8	8.57569.4
31	8.48487.5	8.49548.4	8.50596.1	8.51631.0	8.52653.2	8.53663.1	8.54661.1	8.55647.2	8.56621.9	8.57585.4
32	8.48505.3	8.49566.0	8.50613.5	8.51648.1	8.52670.1	8.53679.9	8.54677.6	8.55663.6	8.56638.1	8.57601.4
33	8.48523.1	8.49583.5	8.50630.8	8.51665.2	8.52687.1	8.53696.6	8.54694.1	8.55679.9	8.56654.2	8.57617.3
34	8.48540.8	8.49601.1	8.50648.2	8.51682.4	8.52704.0	8.53713.3	8.54710.6	8.55696.2	8.56670.4	8.57633.3
35	8.48558.6	8.49618.7	8.50665.5	8.51699.5	8.52720.9	8.53730.0	8.54727.2	8.55712.6	8.56686.5	8.57649.2
36	8.48576.4	8.49636.2	8.50682.9	8.51716.6	8.52737.8	8.53746.8	8.54743.7	8.55728.9	8.56702.7	8.57665.2
37	8.48594.2	8.49653.8	8.50700.2	8.51733.7	8.52754.7	8.53763.5	8.54760.2	8.55745.2	8.56718.8	8.57681.1
38	8.48611.9	8.49671.3	8.50717.5	8.51750.9	8.52771.7	8.53780.2	8.54776.7	8.55761.5	8.56734.9	8.57697.1
39	8.48629.7	8.49688.9	8.50734.8	8.51768.0	8.52788.6	8.53796.9	8.54793.2	8.55777.9	8.56751.0	8.57713.0
40	8.48647.5	8.49706.4	8.50752.2	8.51785.1	8.52805.5	8.53813.6	8.54809.7	8.55794.2	8.56767.2	8.57729.0
41	8.48665.2	8.49723.9	8.50769.5	8.51802.2	8.52822.4	8.53830.3	8.54826.2	8.55810.5	8.56783.3	8.57744.9
42	8.48683.0	8.49741.5	8.50786.8	8.51819.3	8.52839.3	8.53847.0	8.54842.7	8.55826.8	8.56799.4	8.57760.8
43	8.48700.7	8.49759.0	8.50804.1	8.51836.4	8.52856.2	8.53863.7	8.54859.2	8.55843.1	8.56815.5	8.57776.8
44	8.48718.5	8.49776.5	8.50821.4	8.51853.5	8.52873.1	8.53880.4	8.54875.7	8.55859.4	8.56831.6	8.57792.7
45	8.48736.2	8.49794.0	8.50838.7	8.51870.6	8.52889.9	8.53897.1	8.54892.2	8.55875.7	8.56847.7	8.57808.6
46	8.48754.0	8.49811.6	8.50856.0	8.51887.7	8.52906.8	8.53913.7	8.54908.7	8.55892.0	8.56863.8	8.57824.6
47	8.48771.7	8.49829.1	8.50873.3	8.51904.8	8.52923.7	8.53930.4	8.54925.2	8.55908.3	8.56879.9	8.57840.5
48	8.48789.4	8.49846.6	8.50890.6	8.51921.9	8.52940.6	8.53947.1	8.54941.7	8.55924.6	8.56896.0	8.57856.4
49	8.48807.2	8.49864.1	8.50907.9	8.51938.9	8.52957.5	8.53963.8	8.54958.1	8.55940.8	8.56912.1	8.57872.3
50	8.48824.9	8.49881.6	8.50925.2	8.51956.0	8.52974.3	8.53980.4	8.54974.6	8.55957.1	8.56928.2	8.57888.2
51	8.48842.6	8.49899.1	8.50942.5	8.51973.1	8.52991.2	8.53997.1	8.54991.1	8.55973.4	8.56944.3	8.57904.1
52	8.48860.3	8.49916.6	8.50959.8	8.51990.2	8.53008.1	8.54013.8	8.55007.6	8.55989.7	8.56960.4	8.57920.0
53	8.48878.0	8.49934.1	8.50977.0	8.52007.2	8.53024.9	8.54030.4	8.55024.0	8.56005.9	8.56976.5	8.57935.9
54	8.48895.7	8.49951.6	8.50994.3	8.52024.3	8.53041.8	8.54047.1	8.55040.5	8.56022.2	8.56992.6	8.57951.8
55	8.48913.4	8.49969.1	8.51011.6	8.52041.4	8.53058.6	8.54063.7	8.55056.9	8.56038.5	8.57008.7	8.57967.7
56	8.48931.1	8.49986.6	8.51028.9	8.52058.4	8.53075.5	8.54080.4	8.55073.4	8.56054.8	8.57024.7	8.57983.6
57	8.48948.8	8.50004.0	8.51046.1	8.52075.5	8.53092.3	8.54097.0	8.55089.8	8.56071.0	8.57040.8	8.57999.5
58	8.48966.5	8.50021.5	8.51063.4	8.52092.5	8.53109.2	8.54115.7	8.55106.3	8.56087.3	8.57056.9	8.58015.4
59	8.48984.2	8.50039.0	8.51080.6	8.52109.5	8.53126.0	8.54130.3	8.55122.7	8.56103.5	8.57072.9	8.58031.3
60	8.49001.9	8.50056.4	8.51097.9	8.52126.6	8.53142.9	8.54147.0	8.55139.2	8.56119.8	8.57089.0	8.58047.1

Log. Sin $\frac{21}{2}$ t. I⁴.

n	50'	51'	52'	53'	54'	55'	56'	57'	58'	59'
	15.8	15.6	15.4	15.3	15.1	14.9	14.8	14.6	14.5	14.3
0	8.58047.1	8.58994.4	8.59931.1	8.60857.3	8.61773.4	8.62679.5	8.63575.8	8.64462.5	8.65339.9	8.66208.1
1	8.58063.0	8.59010.1	8.59946.6	8.60872.6	8.61788.5	8.62694.5	8.63590.6	8.64477.2	8.65354.5	8.66222.5
2	8.58078.9	8.59025.8	8.59962.1	8.60888.0	8.61803.7	8.62709.5	8.63605.5	8.64491.9	8.65369.0	8.66236.9
3	8.58094.8	8.59041.5	8.59977.6	8.60903.3	8.61818.9	8.62721.5	8.63620.3	8.64506.6	8.65383.6	8.66251.3
4	8.58110.6	8.59057.2	8.59993.1	8.60918.7	8.61834.1	8.62739.5	8.63635.2	8.64521.3	8.65398.1	8.66265.7
5	8.58126.5	8.59072.9	8.60008.6	8.60934.0	8.61849.2	8.62754.5	8.63650.0	8.64536.0	8.65412.6	8.66280.1
6	8.58142.4	8.59088.5	8.60024.1	8.60949.3	8.61864.4	8.62769.5	8.63664.9	8.64550.7	8.65427.2	8.66294.5
7	8.58158.2	8.59104.2	8.60039.6	8.60964.7	8.61879.6	8.62784.5	8.63679.7	8.64565.4	8.65441.7	8.66308.8
8	8.58174.1	8.59119.9	8.60055.2	8.60980.0	8.61894.7	8.62799.5	8.63694.6	8.64580.1	8.65456.2	8.66323.2
9	8.58189.9	8.59135.6	8.60070.6	8.60995.3	8.61909.9	8.62814.5	8.63709.4	8.64594.7	8.65470.7	8.66337.6
10	8.58205.8	8.59151.2	8.60086.1	8.61010.7	8.61925.1	8.62829.5	8.63724.2	8.64609.4	8.65485.3	8.66352.0
11	8.58221.6	8.59166.9	8.60101.6	8.61026.0	8.61940.2	8.62844.5	8.63739.1	8.64624.1	8.65499.8	8.66366.3
12	8.58237.5	8.59182.6	8.60117.1	8.61041.3	8.61955.4	8.62859.5	8.63753.9	8.64638.8	8.65514.3	8.66380.7
13	8.58253.3	8.59198.2	8.60132.6	8.61056.6	8.61970.5	8.62874.5	8.63768.7	8.64653.4	8.65528.8	8.66395.1
14	8.58269.1	8.59213.9	8.60148.1	8.61071.9	8.61985.7	8.62889.5	8.63783.5	8.64668.1	8.65543.3	8.66409.4
15	8.58285.0	8.59229.6	8.60163.6	8.61087.3	8.62000.8	8.62904.4	8.63798.4	8.64682.7	8.65557.8	8.66423.8
16	8.58300.8	8.59245.2	8.60179.1	8.61102.6	8.62016.0	8.62919.4	8.63813.2	8.64697.4	8.65572.3	8.66438.1
17	8.58316.6	8.59260.9	8.60194.5	8.61117.9	8.62031.1	8.62934.4	8.63828.0	8.64712.1	8.65586.8	8.66452.5
18	8.58332.4	8.59276.5	8.60210.0	8.61133.2	8.62046.2	8.62949.4	8.63842.8	8.64726.7	8.65601.3	8.66466.8
19	8.58348.3	8.59292.1	8.60225.5	8.61148.5	8.62061.4	8.62964.3	8.63857.6	8.64741.4	8.65615.8	8.66481.2
20	8.58364.1	8.59307.8	8.60241.0	8.61163.8	8.62076.5	8.62979.3	8.63872.4	8.64756.0	8.65630.3	8.66495.5
21	8.58379.9	8.59323.4	8.60256.4	8.61179.1	8.62091.6	8.62994.3	8.63887.2	8.64770.7	8.65644.8	8.66509.9
22	8.58395.7	8.59339.1	8.60271.9	8.61194.4	8.62106.7	8.63009.2	8.63902.0	8.64785.3	8.65659.3	8.66524.2
23	8.58411.5	8.59354.7	8.60287.3	8.61209.6	8.62121.9	8.63024.2	8.63916.8	8.64800.0	8.65673.8	8.66538.6
24	8.58427.3	8.59370.3	8.60302.8	8.61224.9	8.62137.0	8.63039.1	8.63931.6	8.64814.6	8.65688.3	8.66552.9
25	8.58443.1	8.59386.0	8.60318.2	8.61240.2	8.62152.1	8.63054.1	8.63946.4	8.64829.2	8.65702.8	8.66567.2
26	8.58458.9	8.59401.6	8.60333.7	8.61255.5	8.62167.2	8.63069.0	8.63961.2	8.64843.9	8.65717.3	8.66581.6
27	8.58474.7	8.59417.2	8.60349.1	8.61270.8	8.62182.3	8.63084.0	8.63976.0	8.64858.5	8.65731.8	8.66595.9
28	8.58490.5	8.59432.8	8.60364.6	8.61286.1	8.62197.4	8.63098.9	8.63990.8	8.64873.1	8.65746.2	8.66610.2
29	8.58506.3	8.59448.4	8.60380.0	8.61301.3	8.62212.5	8.63113.9	8.64005.6	8.64887.8	8.65760.7	8.66624.5
30	8.58522.1	8.59464.0	8.60395.5	8.61316.6	8.62227.6	8.63128.8	8.64020.3	8.64902.4	8.65775.2	8.66638.9
31	8.58537.9	8.59479.6	8.60410.9	8.61331.8	8.62242.7	8.63143.8	8.64035.1	8.64917.0	8.65789.6	8.66653.2
32	8.58553.7	8.59495.3	8.60426.3	8.61347.1	8.62257.8	8.63158.7	8.64049.9	8.64931.6	8.65804.1	8.66667.5
33	8.58569.5	8.59510.9	8.60441.8	8.61362.4	8.62272.9	8.63173.7	8.64064.7	8.64946.2	8.65818.6	8.66681.8
34	8.58585.2	8.59526.5	8.60457.2	8.61377.6	8.62288.0	8.63188.6	8.64079.4	8.64960.9	8.65833.0	8.66696.1
35	8.58601.0	8.59542.1	8.60472.6	8.61392.9	8.62303.1	8.63203.5	8.64094.2	8.64975.5	8.65847.5	8.66710.4
36	8.58616.8	8.59557.7	8.60488.0	8.61408.1	8.62318.2	8.63218.4	8.64109.0	8.64990.1	8.65862.0	8.66724.7
37	8.58632.6	8.59573.2	8.60503.4	8.61423.4	8.62333.3	8.63233.3	8.64123.7	8.65004.7	8.65876.4	8.66739.0
38	8.58648.3	8.59588.8	8.60518.9	8.61438.6	8.62348.4	8.63248.2	8.64138.5	8.65019.3	8.65890.9	8.66753.3
39	8.58664.1	8.59604.4	8.60534.3	8.61453.9	8.62363.4	8.63263.2	8.64153.2	8.65033.9	8.65905.3	8.66767.6
40	8.58679.9	8.59620.0	8.60549.7	8.61469.1	8.62378.5	8.63278.1	8.64168.0	8.65048.5	8.65919.8	8.66781.9
41	8.58695.6	8.59635.6	8.60565.1	8.61484.3	8.62393.6	8.63293.0	8.64182.7	8.65063.1	8.65934.2	8.66796.2
42	8.58711.4	8.59651.2	8.60580.5	8.61499.6	8.62408.7	8.63307.9	8.64197.5	8.65077.7	8.65948.6	8.66810.5
43	8.58727.1	8.59666.7	8.60595.9	8.61514.8	8.62423.7	8.63322.8	8.64212.2	8.65092.3	8.65963.1	8.66824.8
44	8.58742.9	8.59682.3	8.60611.3	8.61530.1	8.62438.8	8.63337.7	8.64227.0	8.65106.9	8.65977.5	8.66839.1
45	8.58758.6	8.59697.9	8.60626.7	8.61545.3	8.62453.8	8.63352.6	8.64241.7	8.65121.5	8.65991.9	8.66853.4
46	8.58774.3	8.59713.4	8.60642.1	8.61560.5	8.62468.9	8.63367.5	8.64256.5	8.65136.0	8.66006.4	8.66867.7
47	8.58790.1	8.59729.0	8.60657.5	8.61575.7	8.62484.0	8.63382.4	8.64271.2	8.65150.6	8.66020.8	8.66881.9
48	8.58805.8	8.59744.6	8.60672.9	8.61591.0	8.62499.0	8.63397.3	8.64285.9	8.65165.2	8.66035.2	8.66896.2
49	8.58821.5	8.59760.1	8.60688.3	8.61606.2	8.62514.1	8.63412.2	8.64300.7	8.65179.8	8.66049.6	8.66910.5
50	8.58837.3	8.59775.7	8.60703.6	8.61621.4	8.62529.1	8.63427.0	8.64315.4	8.65194.3	8.66064.1	8.66924.8
51	8.58853.0	8.59791.2	8.60719.0	8.61636.6	8.62544.2	8.63441.9	8.64330.1	8.65208.9	8.66078.5	8.66939.0
52	8.58868.7	8.59806.8	8.60734.4	8.61651.8	8.62559.2	8.63456.8	8.64344.9	8.65223.5	8.66092.9	8.66953.3
53	8.58884.4	8.59822.3	8.60749.8	8.61667.0	8.62574.3	8.63471.7	8.64359.6	8.65238.0	8.66107.3	8.66967.6
54	8.58900.2	8.59837.9	8.60765.1	8.61682.2	8.62589.3	8.63486.6	8.64374.3	8.65252.6	8.66121.7	8.66981.8
55	8.58915.9	8.59853.4	8.60780.5	8.61697.4	8.62604.3	8.63501.4	8.64389.0	8.65267.2	8.66136.1	8.66996.1
56	8.58931.6	8.59868.9	8.60795.9	8.61712.6	8.62619.4	8.63516.3	8.64403.7	8.65281.7	8.66150.5	8.67010.3
57	8.58947.3	8.59884.5	8.60811.2	8.61727.8	8.62634.4	8.63531.2	8.64418.4	8.65296.3	8.66164.9	8.67024.6
58	8.58963.0	8.59900.0	8.60826.6	8.61743.0	8.62649.4	8.63546.0	8.64433.1	8.65310.8	8.66179.3	8.67038.8
59	8.58978.7	8.59915.5	8.60841.9	8.61758.2	8.62664.4	8.63560.9	8.64447.8	8.65325.4	8.66193.7	8.67053.1
60	8.58994.4	8.59931.1	8.60857.3	8.61773.4	8.62679.5	8.63575.8	8.64462.5	8.65339.9	8.66208.1	8.67067.4

n	40'	41'	42'	43'	44'	45'	46'	47'	48'	49'
	14.2	14.0	13.9	13.7	13.6	13.5	13.3	13.2	13.1	13.0
0	8.67067.4	8.67917.7	8.68759.5	8.69592.7	8.70417.6	8.71234.3	8.72043.1	8.72843.9	8.73637.1	8.74422.6
1	8.67081.6	8.67931.8	8.68773.4	8.69606.5	8.70431.3	8.71247.9	8.72056.5	8.72857.2	8.73650.2	8.74435.6
2	8.67095.8	8.67945.9	8.68787.4	8.69620.3	8.70444.9	8.71261.4	8.72069.9	8.72870.5	8.73663.4	8.74448.6
3	8.67110.1	8.67960.0	8.68801.3	8.69634.1	8.70458.6	8.71275.0	8.72083.3	8.72883.8	8.73676.5	8.74461.7
4	8.67124.3	8.67974.1	8.68815.3	8.69647.9	8.70472.3	8.71288.5	8.72096.7	8.72897.0	8.73689.7	8.74474.7
5	8.67138.5	8.67988.2	8.68829.2	8.69661.7	8.70486.0	8.71302.0	8.72110.1	8.72910.3	8.73702.8	8.74487.7
6	8.67152.8	8.68002.3	8.68843.1	8.69675.5	8.70499.6	8.71315.6	8.72123.5	8.72923.6	8.73715.9	8.74500.7
7	8.67167.0	8.68016.4	8.68857.1	8.69689.3	8.70513.3	8.71329.1	8.72136.9	8.72936.8	8.73729.1	8.74513.7
8	8.67181.2	8.68030.5	8.68871.0	8.69703.1	8.70527.0	8.71342.6	8.72150.3	8.72950.1	8.73742.2	8.74526.8
9	8.67195.5	8.68044.5	8.68885.0	8.69716.9	8.70540.6	8.71356.2	8.72163.7	8.72963.4	8.73755.3	8.74539.8
10	8.67209.7	8.68058.6	8.68898.9	8.69730.7	8.70554.3	8.71369.7	8.72177.1	8.72976.6	8.73768.5	8.74552.8
11	8.67223.9	8.68072.7	8.68912.8	8.69744.5	8.70567.9	8.71383.2	8.72190.5	8.72989.9	8.73781.6	8.74565.8
12	8.67238.1	8.68086.8	8.68926.8	8.69758.3	8.70581.6	8.71396.7	8.72203.9	8.73003.2	8.73794.8	8.74578.8
13	8.67252.3	8.68100.8	8.68940.7	8.69772.1	8.70595.2	8.71410.2	8.72217.2	8.73016.4	8.73807.9	8.74591.8
14	8.67266.5	8.68114.9	8.68954.6	8.69785.9	8.70608.9	8.71423.7	8.72230.6	8.73029.7	8.73821.0	8.74604.8
15	8.67280.8	8.68129.0	8.68968.5	8.69799.7	8.70622.5	8.71437.3	8.72244.0	8.73042.9	8.73834.1	8.74617.8
16	8.67295.0	8.68143.0	8.68982.5	8.69813.5	8.70636.2	8.71450.8	8.72257.4	8.73056.2	8.73847.3	8.74630.8
17	8.67309.2	8.68157.1	8.68996.4	8.69827.2	8.70649.8	8.71464.3	8.72270.8	8.73069.4	8.73860.4	8.74643.7
18	8.67323.4	8.68171.1	8.69010.3	8.69841.0	8.70663.5	8.71477.8	8.72284.1	8.73082.7	8.73873.5	8.74656.7
19	8.67337.6	8.68185.2	8.69024.2	8.69854.8	8.70677.1	8.71491.3	8.72297.5	8.73095.9	8.73886.6	8.74669.7
20	8.67351.8	8.68199.3	8.69038.1	8.69868.6	8.70690.8	8.71504.8	8.72310.9	8.73109.2	8.73899.7	8.74682.7
21	8.67366.0	8.68213.3	8.69052.0	8.69882.3	8.70704.4	8.71518.3	8.72324.2	8.73122.4	8.73912.8	8.74695.7
22	8.67380.2	8.68227.4	8.69065.9	8.69896.1	8.70718.0	8.71531.8	8.72337.6	8.73135.6	8.73925.9	8.74708.7
23	8.67394.4	8.68241.4	8.69079.8	8.69909.9	8.70731.6	8.71545.3	8.72351.0	8.73148.9	8.73939.0	8.74721.7
24	8.67408.6	8.68255.5	8.69093.7	8.69923.7	8.70745.3	8.71558.8	8.72364.3	8.73162.1	8.73952.2	8.74734.7
25	8.67422.7	8.68269.5	8.69107.3	8.69937.4	8.70758.9	8.71572.3	8.72377.7	8.73175.3	8.73965.3	8.74747.7
26	8.67436.9	8.68283.5	8.69121.5	8.69951.2	8.70772.5	8.71585.8	8.72391.1	8.73188.5	8.73978.4	8.74760.7
27	8.67451.1	8.68297.6	8.69135.4	8.69964.9	8.70786.1	8.71599.2	8.72404.4	8.73201.8	8.73991.5	8.74773.6
28	8.67465.3	8.68311.6	8.69149.3	8.69978.7	8.70799.8	8.71612.7	8.72417.8	8.73215.0	8.74004.6	8.74786.6
29	8.67479.5	8.68325.6	8.69163.2	8.69992.4	8.70813.4	8.71626.2	8.72431.1	8.73228.2	8.74017.7	8.74799.6
30	8.67493.6	8.68339.7	8.69177.1	8.70006.2	8.70827.0	8.71639.7	8.72444.5	8.73241.4	8.74030.8	8.74812.6
31	8.67507.8	8.68353.7	8.69191.0	8.70019.9	8.70840.6	8.71653.2	8.72457.8	8.73254.7	8.74043.8	8.74825.5
32	8.67522.0	8.68367.7	8.69204.9	8.70033.7	8.70854.2	8.71666.7	8.72471.2	8.73267.9	8.74056.9	8.74838.5
33	8.67536.1	8.68381.7	8.69218.8	8.70047.4	8.70867.8	8.71680.1	8.72484.5	8.73281.1	8.74070.0	8.74851.5
34	8.67550.3	8.68395.8	8.69232.6	8.70061.2	8.70881.4	8.71693.6	8.72497.8	8.73294.3	8.74083.1	8.74864.4
35	8.67564.5	8.68409.8	8.69246.5	8.70074.9	8.70895.0	8.71707.1	8.72511.2	8.73307.5	8.74096.2	8.74877.4
36	8.67578.6	8.68423.8	8.69260.4	8.70088.6	8.70908.6	8.71720.5	8.72524.5	8.73320.7	8.74109.3	8.74890.3
37	8.67592.8	8.68437.8	8.69274.3	8.70102.4	8.70922.2	8.71734.0	8.72537.8	8.73333.9	8.74122.3	8.74903.3
38	8.67606.9	8.68451.8	8.69288.1	8.70116.1	8.70935.8	8.71747.5	8.72551.2	8.73347.1	8.74135.4	8.74916.2
39	8.67621.1	8.68465.8	8.69302.0	8.70129.8	8.70949.4	8.71760.9	8.72564.5	8.73360.3	8.74148.5	8.74929.2
40	8.67635.2	8.68479.8	8.69315.9	8.70143.6	8.70963.0	8.71774.4	8.72577.8	8.73373.5	8.74161.6	8.74942.1
41	8.67649.4	8.68493.8	8.69329.7	8.70157.3	8.70976.6	8.71787.8	8.72591.2	8.73386.7	8.74174.6	8.74955.1
42	8.67663.5	8.68507.8	8.69343.6	8.70171.0	8.70990.2	8.71801.3	8.72604.5	8.73399.9	8.74187.7	8.74968.0
43	8.67677.7	8.68521.8	8.69357.5	8.70184.7	8.71003.7	8.71814.7	8.72617.8	8.73413.1	8.74200.8	8.74981.0
44	8.67691.8	8.68535.8	8.69371.3	8.70198.4	8.71017.3	8.71828.2	8.72631.1	8.73426.3	8.74213.8	8.74993.9
45	8.67705.9	8.68549.8	8.69385.2	8.70212.1	8.71030.9	8.71841.6	8.72644.4	8.73439.5	8.74226.9	8.75006.8
46	8.67720.1	8.68563.8	8.69399.0	8.70225.9	8.71044.5	8.71855.1	8.72657.7	8.73452.7	8.74240.0	8.75019.8
47	8.67734.2	8.68577.8	8.69412.9	8.70239.6	8.71058.1	8.71868.5	8.72671.1	8.73465.8	8.74253.0	8.75032.7
48	8.67748.4	8.68591.8	8.69426.7	8.70253.3	8.71071.6	8.71882.0	8.72684.4	8.73479.0	8.74266.1	8.75045.7
49	8.67762.5	8.68605.8	8.69440.6	8.70267.0	8.71085.2	8.71895.4	8.72697.7	8.73492.2	8.74279.1	8.75058.6
50	8.67776.6	8.68619.8	8.69454.4	8.70280.7	8.71098.8	8.71908.8	8.72711.0	8.73505.4	8.74292.2	8.75071.5
51	8.67790.7	8.68633.7	8.69468.2	8.70294.4	8.71112.3	8.71922.3	8.72724.3	8.73518.6	8.74305.2	8.75084.4
52	8.67804.9	8.68647.7	8.69482.1	8.70308.1	8.71125.9	8.71935.7	8.72737.6	8.73531.7	8.74318.3	8.75097.4
53	8.67819.0	8.68661.7	8.69495.9	8.70321.8	8.71139.5	8.71949.1	8.72750.9	8.73544.9	8.74331.3	8.75110.3
54	8.67833.1	8.68675.7	8.69509.7	8.70335.5	8.71153.0	8.71962.5	8.72764.2	8.73558.1	8.74344.4	8.75123.2
55	8.67847.2	8.68689.6	8.69523.6	8.70349.2	8.71166.6	8.71976.0	8.72777.5	8.73571.2	8.74357.4	8.75136.1
56	8.67861.3	8.68703.6	8.69537.4	8.70362.9	8.71180.1	8.71989.4	8.72790.8	8.73584.4	8.74370.5	8.75149.0
57	8.67875.4	8.68717.6	8.69551.2	8.70376.5	8.71193.7	8.72002.8	8.72804.1	8.73597.6	8.74383.5	8.75161.9
58	8.67889.5	8.68731.5	8.69565.0	8.70390.2	8.71207.2	8.72016.2	8.72817.3	8.73610.7	8.74396.5	8.75174.9
59	8.67903.6	8.68745.5	8.69578.9	8.70403.9	8.71220.8	8.72029.7	8.72830.6	8.73623.9	8.74409.6	8.75187.8
60	8.67917.7	8.68759.5	8.69592.7	8.70417.6	8.71234.3	8.72043.1	8.72843.9	8.73637.1	8.74422.6	8.75200.7

Log. Sin²¹. t. I¹¹.

"	50' 12.8	51' 12.7	52' 12.6	53' 12.5	54' 12.4	55' 12.3	56' 12.2	57' 12.0	58' 11.9	59' 11.8
0	8.75200.7	8.75971.5	8.76735.0	8.77491.6	8.78241.1	8.78983.9	8.79719.9	8.80449.4	8.81172.3	8.81888.9
1	8.75213.6	8.75984.2	8.76747.7	8.77504.1	8.78253.6	8.78996.2	8.79732.1	8.80461.5	8.81184.3	8.81900.8
2	8.75226.5	8.75997.0	8.76760.4	8.77516.6	8.78266.0	8.79008.5	8.79744.3	8.80473.6	8.81196.3	8.81912.7
3	8.75239.4	8.76009.8	8.76773.0	8.77529.2	8.78278.4	8.79020.8	8.79756.5	8.80485.7	8.81208.3	8.81924.6
4	8.75252.3	8.76022.6	8.76785.7	8.77541.7	8.78290.9	8.79033.2	8.79768.8	8.80497.8	8.81220.3	8.81936.5
5	8.75265.2	8.76035.3	8.76798.3	8.77554.3	8.78303.3	8.79045.5	8.79781.0	8.80509.9	8.81232.3	8.81948.4
6	8.75278.1	8.76048.1	8.76811.0	8.77566.8	8.78315.7	8.79057.8	8.79793.2	8.80522.0	8.81244.3	8.81960.2
7	8.75291.0	8.76060.9	8.76823.6	8.77579.4	8.78328.1	8.79070.1	8.79805.4	8.80534.0	8.81256.3	8.81972.1
8	8.75303.9	8.76073.7	8.76836.3	8.77591.9	8.78340.6	8.79082.4	8.79817.6	8.80546.1	8.81268.3	8.81984.0
9	8.75316.8	8.76086.4	8.76848.9	8.77604.4	8.78353.0	8.79094.7	8.79829.7	8.80558.2	8.81280.2	8.81995.9
10	8.75329.6	8.76099.2	8.76861.6	8.77617.0	8.78365.4	8.79107.0	8.79841.9	8.80570.3	8.81292.2	8.82007.7
11	8.75342.5	8.76112.0	8.76874.2	8.77629.5	8.78377.8	8.79119.3	8.79854.1	8.80582.4	8.81304.2	8.82019.6
12	8.75355.4	8.76124.7	8.76886.9	8.77642.0	8.78390.2	8.79131.6	8.79866.3	8.80594.5	8.81316.2	8.82031.5
13	8.75368.3	8.76137.5	8.76899.5	8.77654.5	8.78402.6	8.79143.9	8.79878.5	8.80606.6	8.81328.1	8.82043.4
14	8.75381.2	8.76150.3	8.76912.2	8.77667.1	8.78415.0	8.79156.2	8.79890.7	8.80618.6	8.81340.1	8.82055.2
15	8.75394.1	8.76163.0	8.76924.8	8.77679.6	8.78427.4	8.79168.5	8.79902.9	8.80630.7	8.81352.1	8.82067.1
16	8.75406.9	8.76175.8	8.76937.5	8.77692.1	8.78439.9	8.79180.8	8.79915.1	8.80642.8	8.81364.1	8.82079.0
17	8.75419.8	8.76188.5	8.76950.1	8.77704.6	8.78452.3	8.79193.1	8.79927.3	8.80654.9	8.81376.0	8.82090.8
18	8.75432.7	8.76201.3	8.76962.7	8.77717.1	8.78464.7	8.79205.4	8.79939.4	8.80666.9	8.81388.0	8.82102.7
19	8.75445.5	8.76214.0	8.76975.3	8.77729.7	8.78477.1	8.79217.7	8.79951.6	8.80679.0	8.81399.9	8.82114.5
20	8.75458.4	8.76226.8	8.76988.0	8.77742.2	8.78489.5	8.79230.0	8.79963.8	8.80691.1	8.81411.9	8.82126.4
21	8.75471.3	8.76239.5	8.77000.6	8.77754.7	8.78501.8	8.79242.3	8.79976.0	8.80703.1	8.81423.9	8.82138.2
22	8.75484.1	8.76252.3	8.77013.2	8.77767.2	8.78514.2	8.79254.5	8.79988.1	8.80715.2	8.81435.8	8.82150.1
23	8.75497.0	8.76265.0	8.77025.8	8.77779.7	8.78526.6	8.79266.8	8.80000.3	8.80727.3	8.81447.8	8.82161.9
24	8.75509.9	8.76277.7	8.77038.5	8.77792.2	8.78539.0	8.79279.1	8.80012.5	8.80739.3	8.81459.7	8.82173.8
25	8.75522.7	8.76290.5	8.77051.1	8.77804.7	8.78551.4	8.79291.4	8.80024.7	8.80751.4	8.81471.7	8.82185.6
26	8.75535.6	8.76303.2	8.77063.7	8.77817.2	8.78563.8	8.79303.6	8.80036.8	8.80763.4	8.81483.6	8.82197.5
27	8.75548.4	8.76315.9	8.77076.3	8.77829.7	8.78576.2	8.79315.9	8.80049.0	8.80775.5	8.81495.6	8.82209.3
28	8.75561.3	8.76328.7	8.77088.9	8.77842.2	8.78588.6	8.79328.2	8.80061.2	8.80787.6	8.81507.5	8.82221.2
29	8.75574.1	8.76341.4	8.77101.5	8.77854.7	8.78601.0	8.79340.5	8.80073.3	8.80799.6	8.81519.5	8.82233.0
30	8.75587.0	8.76354.1	8.77114.2	8.77867.2	8.78613.3	8.79352.7	8.80085.5	8.80811.7	8.81531.4	8.82244.9
31	8.75599.8	8.76366.8	8.77126.8	8.77879.7	8.78625.7	8.79365.0	8.80097.6	8.80823.7	8.81543.4	8.82256.7
32	8.75612.7	8.76379.6	8.77139.4	8.77892.2	8.78638.1	8.79377.3	8.80109.8	8.80835.8	8.81555.3	8.82268.5
33	8.75625.5	8.76392.3	8.77152.0	8.77904.7	8.78650.5	8.79389.5	8.80121.9	8.80847.8	8.81567.2	8.82280.4
34	8.75638.3	8.76405.0	8.77164.6	8.77917.1	8.78662.8	8.79401.8	8.80134.1	8.80859.8	8.81579.2	8.82292.2
35	8.75651.2	8.76417.7	8.77177.2	8.77929.6	8.78675.2	8.79414.0	8.80146.2	8.80871.9	8.81591.1	8.82304.0
36	8.75664.0	8.76430.5	8.77189.8	8.77942.1	8.78687.6	8.79426.3	8.80158.4	8.80883.9	8.81603.1	8.82315.9
37	8.75676.8	8.76443.2	8.77202.4	8.77954.6	8.78700.0	8.79438.5	8.80170.5	8.80895.9	8.81615.0	8.82327.7
38	8.75689.7	8.76455.9	8.77215.0	8.77967.1	8.78712.3	8.79450.8	8.80182.7	8.80908.0	8.81626.9	8.82339.5
39	8.75702.5	8.76468.6	8.77227.6	8.77979.6	8.78724.7	8.79463.1	8.80194.8	8.80920.0	8.81638.8	8.82351.3
40	8.75715.3	8.76481.3	8.77240.2	8.77992.0	8.78737.0	8.79475.3	8.80207.0	8.80932.1	8.81650.8	8.82363.2
41	8.75728.2	8.76494.0	8.77252.7	8.78004.5	8.78749.4	8.79487.6	8.80219.1	8.80944.1	8.81662.7	8.82375.0
42	8.75741.0	8.76506.7	8.77265.3	8.78017.0	8.78761.8	8.79499.8	8.80231.2	8.80956.1	8.81674.6	8.82386.8
43	8.75753.8	8.76519.4	8.77277.9	8.78029.4	8.78774.1	8.79512.0	8.80243.4	8.80968.1	8.81686.5	8.82398.6
44	8.75766.6	8.76532.1	8.77290.5	8.78041.9	8.78786.5	8.79524.3	8.80255.5	8.80980.2	8.81698.5	8.82410.4
45	8.75779.4	8.76544.8	8.77303.1	8.78054.4	8.78798.8	8.79536.5	8.80267.6	8.80992.2	8.81710.4	8.82422.2
46	8.75792.2	8.76557.5	8.77315.6	8.78066.8	8.78811.1	8.79548.8	8.80279.8	8.81004.2	8.81722.3	8.82434.1
47	8.75805.1	8.76570.2	8.77328.2	8.78079.3	8.78823.5	8.79561.0	8.80291.9	8.81016.2	8.81734.2	8.82445.9
48	8.75817.9	8.76582.9	8.77340.8	8.78091.8	8.78835.9	8.79573.3	8.80304.0	8.81028.3	8.81746.1	8.82457.7
49	8.75830.7	8.76595.6	8.77353.4	8.78104.2	8.78848.2	8.79585.5	8.80316.1	8.81040.3	8.81758.0	8.82469.5
50	8.75843.5	8.76608.3	8.77365.9	8.78116.7	8.78860.6	8.79597.7	8.80328.3	8.81052.3	8.81769.9	8.82481.3
51	8.75856.3	8.76620.9	8.77378.5	8.78129.1	8.78872.9	8.79609.9	8.80340.4	8.81064.3	8.81781.8	8.82493.1
52	8.75869.1	8.76633.6	8.77391.1	8.78141.6	8.78885.2	8.79622.2	8.80352.5	8.81076.3	8.81793.8	8.82504.9
53	8.75881.9	8.76646.3	8.77403.6	8.78154.0	8.78897.6	8.79634.4	8.80364.6	8.81088.3	8.81805.7	8.82516.7
54	8.75894.7	8.76659.0	8.77416.2	8.78166.5	8.78909.9	8.79646.6	8.80376.7	8.81100.3	8.81817.6	8.82528.5
55	8.75907.5	8.76671.7	8.77428.8	8.78178.9	8.78922.2	8.79658.8	8.80388.8	8.81112.3	8.81829.5	8.82540.3
56	8.75920.3	8.76684.4	8.77441.3	8.78191.4	8.78934.6	8.79671.1	8.80401.0	8.81124.3	8.81841.4	8.82552.1
57	8.75933.1	8.76697.0	8.77453.9	8.78203.8	8.78946.9	8.79683.3	8.80413.1	8.81136.3	8.81853.2	8.82563.9
58	8.75945.9	8.76709.7	8.77466.4	8.78216.3	8.78959.2	8.79695.5	8.80425.2	8.81148.3	8.81865.1	8.82575.7
59	8.75958.7	8.76722.3	8.77479.0	8.78228.7	8.78971.5	8.79707.7	8.80437.3	8.81160.3	8.81877.0	8.82587.4
60	8.75971.5	8.76735.0	8.77491.6	8.78241.1	8.78983.9	8.79719.9	8.80449.4	8.81172.3	8.81888.9	8.82599.2

"	0'	1'	2'	3'	4'	5'	6'	7'	8'	9'
	11.7	11.6	11.5	11.4	11.3	11.2	11.2	11.1	11.0	10.9
0	8,82599.2	8,83303.4	8,84001.5	8,84693.6	8,85379.8	8,86060.2	8,86734.9	8,87404.0	8,88067.6	8,88725.8
1	8,82611.0	8,83315.1	8,84013.0	8,84705.0	8,85391.1	8,86071.5	8,86746.1	8,87415.1	8,88078.6	8,88736.7
2	8,82622.8	8,83326.7	8,84024.6	8,84716.5	8,85402.5	8,86082.8	8,86757.3	8,87426.2	8,88089.6	8,88747.6
3	8,82634.6	8,83338.4	8,84036.2	8,84728.0	8,85413.9	8,86094.1	8,86768.5	8,87437.3	8,88100.7	8,88758.5
4	8,82646.4	8,83350.1	8,84047.8	8,84739.5	8,85425.3	8,86105.3	8,86779.7	8,87448.4	8,88111.7	8,88769.4
5	8,82658.2	8,83361.8	8,84059.4	8,84751.0	8,85436.7	8,86116.6	8,86790.9	8,87459.5	8,88122.7	8,88780.4
6	8,82669.9	8,83373.5	8,84070.9	8,84762.4	8,85448.1	8,86127.9	8,86802.1	8,87470.6	8,88133.7	8,88791.3
7	8,82681.7	8,83385.1	8,84082.5	8,84773.9	8,85459.4	8,86139.2	8,86813.3	8,87481.7	8,88144.7	8,88802.2
8	8,82693.5	8,83396.8	8,84094.1	8,84785.4	8,85470.8	8,86150.5	8,86824.5	8,87492.8	8,88155.7	8,88813.1
9	8,82705.3	8,83408.5	8,84105.7	8,84796.9	8,85482.2	8,86161.8	8,86835.6	8,87503.9	8,88166.7	8,88824.0
10	8,82717.0	8,83420.2	8,84117.2	8,84808.3	8,85493.6	8,86173.0	8,86846.8	8,87515.0	8,88177.7	8,88834.9
11	8,82728.8	8,83431.8	8,84128.8	8,84819.8	8,85504.9	8,86184.3	8,86858.0	8,87526.1	8,88188.7	8,88845.8
12	8,82740.6	8,83443.5	8,84140.4	8,84831.3	8,85516.3	8,86195.6	8,86869.2	8,87537.2	8,88199.7	8,88856.7
13	8,82752.3	8,83455.1	8,84151.9	8,84842.7	8,85527.7	8,86206.9	8,86880.4	8,87548.3	8,88210.7	8,88867.6
14	8,82764.1	8,83466.8	8,84163.5	8,84854.2	8,85539.0	8,86218.1	8,86891.5	8,87559.4	8,88221.7	8,88878.6
15	8,82775.8	8,83478.5	8,84175.0	8,84865.7	8,85550.4	8,86229.4	8,86902.7	8,87570.4	8,88232.7	8,88889.5
16	8,82787.6	8,83490.1	8,84186.6	8,84877.1	8,85561.8	8,86240.7	8,86913.9	8,87581.5	8,88243.6	8,88900.4
17	8,82799.4	8,83501.8	8,84198.2	8,84888.6	8,85573.1	8,86251.9	8,86925.1	8,87592.6	8,88254.6	8,88911.3
18	8,82811.1	8,83513.4	8,84209.7	8,84900.0	8,85584.5	8,86263.2	8,86936.2	8,87603.7	8,88265.6	8,88922.2
19	8,82822.9	8,83525.1	8,84221.3	8,84911.5	8,85595.9	8,86274.5	8,86947.4	8,87614.8	8,88276.6	8,88933.0
20	8,82834.6	8,83536.7	8,84232.8	8,84922.9	8,85607.2	8,86285.7	8,86958.6	8,87625.8	8,88287.6	8,88943.9
21	8,82846.4	8,83548.4	8,84244.4	8,84934.4	8,85618.6	8,86297.0	8,86969.7	8,87636.9	8,88298.6	8,88954.9
22	8,82858.1	8,83560.1	8,84255.9	8,84945.3	8,85629.9	8,86308.2	8,86980.9	8,87648.0	8,88309.6	8,88965.7
23	8,82869.9	8,83571.7	8,84267.5	8,84957.3	8,85641.3	8,86319.5	8,86992.1	8,87659.1	8,88320.5	8,88976.6
24	8,82881.6	8,83583.3	8,84279.0	8,84968.7	8,85652.6	8,86330.8	8,87003.2	8,87670.1	8,88331.5	8,88987.5
25	8,82893.4	8,83595.0	8,84290.5	8,84980.2	8,85664.0	8,86342.0	8,87014.4	8,87681.2	8,88342.5	8,88998.4
26	8,82905.1	8,83606.6	8,84302.1	8,84991.6	8,85675.3	8,86353.3	8,87025.5	8,87692.3	8,88353.5	8,89009.3
27	8,82916.9	8,83618.3	8,84313.6	8,85003.1	8,85686.7	8,86364.5	8,87036.7	8,87703.3	8,88364.4	8,89020.2
28	8,82928.6	8,83629.9	8,84325.2	8,85014.5	8,85698.0	8,86375.8	8,87047.9	8,87714.4	8,88375.4	8,89031.1
29	8,82940.3	8,83641.5	8,84336.7	8,85026.0	8,85709.4	8,86387.0	8,87059.0	8,87725.4	8,88386.4	8,89041.9
30	8,82952.1	8,83653.2	8,84348.3	8,85037.4	8,85720.7	8,86398.3	8,87070.2	8,87736.5	8,88397.4	8,89052.8
31	8,82963.8	8,83664.8	8,84359.8	8,85048.8	8,85732.0	8,86409.5	8,87081.3	8,87747.6	8,88408.3	8,89063.7
32	8,82975.6	8,83676.4	8,84371.3	8,85060.3	8,85743.4	8,86420.7	8,87092.5	8,87758.6	8,88419.3	8,89074.6
33	8,82987.3	8,83688.1	8,84382.8	8,85071.7	8,85754.7	8,86432.0	8,87103.6	8,87769.7	8,88430.3	8,89085.5
34	8,82999.0	8,83699.7	8,84394.4	8,85083.2	8,85766.0	8,86443.2	8,87114.8	8,87780.7	8,88441.2	8,89096.3
35	8,83010.7	8,83711.3	8,84405.9	8,85094.6	8,85777.4	8,86454.5	8,87125.9	8,87791.8	8,88452.2	8,89107.2
36	8,83022.5	8,83723.0	8,84417.4	8,85106.0	8,85788.7	8,86465.7	8,87137.0	8,87802.8	8,88463.2	8,89118.1
37	8,83034.2	8,83734.6	8,84428.9	8,85117.4	8,85800.0	8,86476.9	8,87148.2	8,87813.9	8,88474.1	8,89128.9
38	8,83045.9	8,83746.2	8,84440.5	8,85128.8	8,85811.4	8,86488.2	8,87159.3	8,87824.9	8,88485.1	8,89139.8
39	8,83057.6	8,83757.8	8,84452.0	8,85140.3	8,85822.7	8,86499.4	8,87170.5	8,87836.0	8,88496.0	8,89150.7
40	8,83069.4	8,83769.4	8,84463.5	8,85151.7	8,85834.0	8,86510.6	8,87181.6	8,87847.0	8,88507.0	8,89161.5
41	8,83081.1	8,83781.0	8,84475.0	8,85163.1	8,85845.3	8,86521.9	8,87192.7	8,87858.1	8,88517.9	8,89172.4
42	8,83092.8	8,83792.7	8,84486.6	8,85174.5	8,85856.7	8,86533.1	8,87203.9	8,87869.1	8,88528.9	8,89183.3
43	8,83104.5	8,83804.3	8,84498.1	8,85185.9	8,85868.0	8,86544.3	8,87215.0	8,87880.2	8,88539.8	8,89194.1
44	8,83116.2	8,83815.9	8,84509.6	8,85197.3	8,85879.3	8,86555.5	8,87226.1	8,87891.2	8,88550.8	8,89205.0
45	8,83127.9	8,83827.5	8,84521.1	8,85208.6	8,85890.6	8,86566.8	8,87237.3	8,87902.2	8,88561.7	8,89215.9
46	8,83139.6	8,83839.1	8,84532.6	8,85220.2	8,85901.9	8,86578.0	8,87248.4	8,87913.3	8,88572.7	8,89226.7
47	8,83151.3	8,83850.7	8,84544.1	8,85231.6	8,85913.2	8,86589.2	8,87259.5	8,87924.3	8,88583.6	8,89237.6
48	8,83163.0	8,83862.3	8,84555.6	8,85243.0	8,85924.6	8,86600.4	8,87270.6	8,87935.3	8,88594.6	8,89248.4
49	8,83174.8	8,83873.9	8,84567.1	8,85254.4	8,85935.9	8,86611.6	8,87281.8	8,87946.4	8,88605.5	8,89259.3
50	8,83186.5	8,83885.5	8,84578.6	8,85265.8	8,85947.2	8,86622.9	8,87292.9	8,87957.4	8,88616.4	8,89270.1
51	8,83198.2	8,83897.1	8,84590.1	8,85277.2	8,85958.5	8,86634.1	8,87304.0	8,87968.4	8,88627.4	8,89281.0
52	8,83209.9	8,83908.7	8,84601.6	8,85288.6	8,85969.8	8,86645.3	8,87315.1	8,87979.5	8,88638.3	8,89291.8
53	8,83221.6	8,83920.3	8,84613.1	8,85300.0	8,85981.1	8,86656.5	8,87326.3	8,87990.5	8,88649.3	8,89302.7
54	8,83233.2	8,83931.9	8,84624.6	8,85311.4	8,85992.4	8,86667.7	8,87337.4	8,88001.5	8,88660.2	8,89313.5
55	8,83244.9	8,83943.5	8,84636.1	8,85322.8	8,86003.7	8,86678.9	8,87348.5	8,88012.5	8,88671.1	8,89324.4
56	8,83256.6	8,83955.1	8,84647.6	8,85334.2	8,86015.0	8,86690.1	8,87359.6	8,88023.5	8,88682.1	8,89335.2
57	8,83268.3	8,83966.7	8,84659.1	8,85345.6	8,86026.3	8,86701.3	8,87370.7	8,88034.6	8,88693.0	8,89346.0
58	8,83280.0	8,83978.3	8,84670.6	8,85357.0	8,86037.6	8,86712.5	8,87381.8	8,88045.6	8,88703.9	8,89356.9
59	8,83291.7	8,83989.9	8,84682.1	8,85368.4	8,86048.9	8,86723.7	8,87392.9	8,88056.6	8,88714.8	8,89367.7
60	8,83303.4	8,84001.5	8,84693.6	8,85379.8	8,86060.2	8,86734.9	8,87404.0	8,88067.6	8,88725.8	8,89378.5

Log. Sin²¹. t. 2¹.

n	10' 10.8	11' 10.7	12' 10.6	13' 10.5	14' 10.5	15' 10.4	16' 10.3	17' 10.2	18' 10.1	19' 10.0
0	8,89378.5	8,90026.1	8,90668.4	8,91305.5	8,91937.7	8,92564.8	8,93187.1	8,93804.5	8,94417.1	8,95025.1
1	8,89389.4	8,90036.8	8,90679.1	8,91316.1	8,91948.2	8,92575.2	8,93197.4	8,93814.7	8,94427.3	8,95035.2
2	8,89400.2	8,90047.6	8,90689.7	8,91326.7	8,91958.7	8,92585.6	8,93207.7	8,93825.0	8,94437.5	8,95045.2
3	8,89411.0	8,90058.3	8,90700.3	8,91337.3	8,91969.2	8,92596.1	8,93218.1	8,93835.2	8,94447.6	8,95055.3
4	8,89421.9	8,90069.0	8,90711.0	8,91347.8	8,91979.6	8,92606.5	8,93228.4	8,93845.5	8,94457.8	8,95065.4
5	8,89432.7	8,90079.8	8,90721.7	8,91358.4	8,91990.1	8,92616.9	8,93238.7	8,93855.7	8,94468.0	8,95075.5
6	8,89443.5	8,90090.5	8,90732.3	8,91369.0	8,92000.6	8,92627.3	8,93249.0	8,93866.0	8,94478.1	8,95085.6
7	8,89454.4	8,90101.3	8,90743.0	8,91379.6	8,92011.1	8,92637.7	8,93259.3	8,93876.2	8,94488.3	8,95095.7
8	8,89465.2	8,90112.0	8,90753.6	8,91390.1	8,92021.6	8,92648.1	8,93269.7	8,93886.4	8,94498.4	8,95105.8
9	8,89476.0	8,90122.7	8,90764.3	8,91400.7	8,92032.1	8,92658.5	8,93280.0	8,93896.7	8,94508.6	8,95115.8
10	8,89486.8	8,90133.5	8,90774.9	8,91411.3	8,92042.5	8,92668.9	8,93290.3	8,93906.9	8,94518.8	8,95125.9
11	8,89497.6	8,90144.2	8,90785.6	8,91421.8	8,92053.0	8,92679.3	8,93300.6	8,93917.1	8,94528.9	8,95136.0
12	8,89508.5	8,90154.9	8,90796.2	8,91432.4	8,92063.5	8,92689.7	8,93310.9	8,93927.4	8,94539.1	8,95146.1
13	8,89519.3	8,90165.7	8,90806.8	8,91442.9	8,92074.0	8,92700.1	8,93321.3	8,93937.6	8,94549.2	8,95156.2
14	8,89530.1	8,90176.4	8,90817.5	8,91453.5	8,92084.5	8,92710.5	8,93331.6	8,93947.9	8,94559.4	8,95166.2
15	8,89540.9	8,90187.1	8,90828.1	8,91464.0	8,92094.9	8,92720.9	8,93341.9	8,93958.1	8,94569.6	8,95176.3
16	8,89551.7	8,90197.8	8,90838.8	8,91474.6	8,92105.4	8,92731.2	8,93352.2	8,93968.3	8,94579.7	8,95186.4
17	8,89562.5	8,90208.6	8,90849.4	8,91485.2	8,92115.9	8,92741.6	8,93362.5	8,93978.6	8,94589.8	8,95196.5
18	8,89573.3	8,90219.3	8,90860.1	8,91495.7	8,92126.3	8,92752.0	8,93372.8	8,93988.8	8,94600.0	8,95206.5
19	8,89584.2	8,90230.0	8,90870.7	8,91506.3	8,92136.8	8,92762.4	8,93383.1	8,93999.0	8,94610.1	8,95216.6
20	8,89595.0	8,90240.7	8,90881.3	8,91516.8	8,92147.3	8,92772.8	8,93393.4	8,94009.2	8,94620.3	8,95226.7
21	8,89605.8	8,90251.5	8,90892.0	8,91527.4	8,92157.7	8,92783.2	8,93403.7	8,94019.4	8,94630.4	8,95236.7
22	8,89616.6	8,90262.2	8,90902.6	8,91537.9	8,92168.2	8,92793.5	8,93414.0	8,94029.7	8,94640.6	8,95246.8
23	8,89627.4	8,90272.9	8,90913.2	8,91548.5	8,92178.7	8,92803.9	8,93424.3	8,94039.9	8,94650.7	8,95256.9
24	8,89638.2	8,90283.6	8,90923.8	8,91559.0	8,92189.1	8,92814.3	8,93434.6	8,94050.1	8,94660.9	8,95266.9
25	8,89649.0	8,90294.3	8,90934.5	8,91569.5	8,92199.6	8,92824.7	8,93444.9	8,94060.3	8,94671.0	8,95277.0
26	8,89659.8	8,90305.0	8,90945.1	8,91580.1	8,92210.0	8,92835.1	8,93455.2	8,94070.5	8,94681.1	8,95287.1
27	8,89670.6	8,90315.7	8,90955.7	8,91590.6	8,92220.5	8,92845.4	8,93465.5	8,94080.8	8,94691.3	8,95297.1
28	8,89681.4	8,90326.4	8,90966.3	8,91601.2	8,92230.9	8,92855.8	8,93475.8	8,94091.0	8,94701.4	8,95307.2
29	8,89692.2	8,90337.1	8,90977.0	8,91611.7	8,92241.4	8,92866.2	8,93486.1	8,94101.2	8,94711.5	8,95317.2
30	8,89703.0	8,90347.9	8,90987.6	8,91622.2	8,92251.9	8,92876.6	8,93496.4	8,94111.4	8,94721.7	8,95327.3
31	8,89713.8	8,90358.6	8,90998.2	8,91632.8	8,92262.3	8,92886.9	8,93506.7	8,94121.6	8,94731.8	8,95337.3
32	8,89724.5	8,90369.3	8,91008.8	8,91643.3	8,92272.8	8,92897.3	8,93517.0	8,94131.8	8,94741.9	8,95347.4
33	8,89735.3	8,90380.0	8,91019.4	8,91653.8	8,92283.2	8,92907.7	8,93527.2	8,94142.0	8,94752.1	8,95357.5
34	8,89746.1	8,90390.7	8,91030.0	8,91664.4	8,92293.7	8,92918.0	8,93537.5	8,94152.2	8,94762.2	8,95367.5
35	8,89756.9	8,90401.4	8,91040.7	8,91674.9	8,92304.1	8,92928.4	8,93547.8	8,94162.4	8,94772.3	8,95377.6
36	8,89767.7	8,90412.1	8,91051.3	8,91685.4	8,92314.6	8,92938.8	8,93558.1	8,94172.6	8,94782.4	8,95387.6
37	8,89778.5	8,90422.8	8,91061.9	8,91695.9	8,92325.0	8,92949.1	8,93568.4	8,94182.8	8,94792.6	8,95397.6
38	8,89789.2	8,90433.5	8,91072.5	8,91706.5	8,92335.4	8,92959.5	8,93578.6	8,94193.0	8,94802.7	8,95407.7
39	8,89800.0	8,90444.2	8,91083.1	8,91717.0	8,92345.9	8,92969.8	8,93588.9	8,94203.2	8,94812.8	8,95417.7
40	8,89810.8	8,90454.8	8,91093.7	8,91727.5	8,92356.3	8,92980.2	8,93599.2	8,94213.4	8,94822.9	8,95427.8
41	8,89821.6	8,90465.5	8,91104.3	8,91738.0	8,92366.8	8,92990.6	8,93609.5	8,94223.6	8,94833.0	8,95437.8
42	8,89832.4	8,90476.2	8,91114.9	8,91748.6	8,92377.2	8,93000.9	8,93619.8	8,94233.8	8,94843.2	8,95447.9
43	8,89843.1	8,90486.9	8,91125.5	8,91759.1	8,92387.6	8,93011.3	8,93630.0	8,94244.0	8,94853.3	8,95457.9
44	8,89853.9	8,90497.6	8,91136.1	8,91769.6	8,92398.1	8,93021.6	8,93640.3	8,94254.2	8,94863.4	8,95467.9
45	8,89864.7	8,90508.3	8,91146.7	8,91780.1	8,92408.5	8,93032.0	8,93650.6	8,94264.4	8,94873.5	8,95478.0
46	8,89875.4	8,90519.0	8,91157.3	8,91790.6	8,92418.9	8,93042.3	8,93660.8	8,94274.6	8,94883.6	8,95488.0
47	8,89886.2	8,90529.6	8,91167.9	8,91801.1	8,92429.4	8,93052.7	8,93671.1	8,94284.8	8,94893.7	8,95498.0
48	8,89897.0	8,90540.3	8,91178.5	8,91811.6	8,92439.8	8,93063.0	8,93681.4	8,94295.0	8,94903.8	8,95508.1
49	8,89907.7	8,90551.0	8,91189.1	8,91822.2	8,92450.2	8,93073.3	8,93691.6	8,94305.1	8,94913.9	8,95518.1
50	8,89918.5	8,90561.7	8,91199.7	8,91832.7	8,92460.6	8,93083.7	8,93701.9	8,94315.3	8,94924.1	8,95528.1
51	8,89929.3	8,90572.3	8,91210.3	8,91843.2	8,92471.1	8,93094.0	8,93712.2	8,94325.5	8,94934.2	8,95538.2
52	8,89940.0	8,90583.0	8,91220.9	8,91853.7	8,92481.5	8,93104.4	8,93722.4	8,94335.7	8,94944.3	8,95548.2
53	8,89950.8	8,90593.7	8,91231.5	8,91864.2	8,92491.9	8,93114.7	8,93732.7	8,94345.9	8,94954.4	8,95558.2
54	8,89961.5	8,90604.4	8,91242.0	8,91874.7	8,92502.3	8,93125.1	8,93743.0	8,94356.1	8,94964.5	8,95568.2
55	8,89972.3	8,90615.0	8,91252.6	8,91885.2	8,92512.7	8,93135.4	8,93753.2	8,94366.2	8,94974.6	8,95578.3
56	8,89983.1	8,90625.7	8,91263.2	8,91895.7	8,92523.2	8,93145.7	8,93763.5	8,94376.4	8,94984.7	8,95588.3
57	8,89993.8	8,90636.4	8,91273.8	8,91906.2	8,92533.6	8,93156.1	8,93773.7	8,94386.6	8,94994.8	8,95598.3
58	8,90004.6	8,90647.0	8,91284.4	8,91916.7	8,92544.0	8,93166.4	8,93784.0	8,94396.8	8,95004.9	8,95608.3
59	8,90015.3	8,90657.7	8,91295.0	8,91927.2	8,92554.4	8,93176.7	8,93794.2	8,94406.9	8,95015.0	8,95618.3
60	8,90026.1	8,90668.4	8,91305.5	8,91937.7	8,92564.8	8,93187.1	8,93804.5	8,94417.1	8,95025.1	8,95628.4

"	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'
	10.0	9.9	9.8	9.8	9.7	9.6	9.5	9.5	9.4	9.3
0	8,95628.4	8,96227.1	8,96821.3	8,97411.1	8,97996.5	8,98577.5	8,99154.3	8,99726.9	9,00295.3	9,00859.6
1	8,95638.4	8,96237.0	8,96831.2	8,97420.9	8,98006.2	8,98587.2	8,99163.9	8,99736.4	9,00304.7	9,00869.0
2	8,95648.4	8,96247.0	8,96841.0	8,97430.7	8,98015.9	8,98596.8	8,99173.5	8,99745.9	9,00314.2	9,00878.3
3	8,95658.4	8,96256.9	8,96850.9	8,97440.5	8,98025.6	8,98606.5	8,99183.0	8,99755.4	9,00323.6	9,00887.7
4	8,95668.4	8,96266.8	8,96860.8	8,97450.2	8,98035.3	8,98616.1	8,99192.6	8,99764.9	9,00333.0	9,00897.1
5	8,95678.4	8,96276.8	8,96870.6	8,97460.0	8,98045.1	8,98625.8	8,99202.2	8,99774.4	9,00342.5	9,00906.4
6	8,95688.4	8,96286.7	8,96880.5	8,97469.8	8,98054.8	8,98635.4	8,99211.8	8,99783.9	9,00351.9	9,00915.8
7	8,95698.5	8,96296.6	8,96890.3	8,97479.6	8,98064.5	8,98645.0	8,99221.3	8,99793.4	9,00361.3	9,00925.2
8	8,95708.5	8,96306.6	8,96900.2	8,97489.4	8,98074.2	8,98654.7	8,99230.9	8,99802.9	9,00370.8	9,00934.5
9	8,95718.5	8,96316.5	8,96910.1	8,97499.2	8,98083.9	8,98664.3	8,99240.5	8,99812.4	9,00380.2	9,00943.9
10	8,95728.5	8,96326.4	8,96919.9	8,97509.0	8,98093.6	8,98674.0	8,99250.0	8,99821.9	9,00389.6	9,00953.2
11	8,95738.5	8,96336.4	8,96929.8	8,97518.7	8,98103.3	8,98683.6	8,99259.6	8,99831.4	9,00399.0	9,00962.6
12	8,95748.5	8,96346.3	8,96939.6	8,97528.5	8,98113.0	8,98693.2	8,99269.2	8,99840.9	9,00408.5	9,00972.0
13	8,95758.5	8,96356.2	8,96949.5	8,97538.3	8,98122.7	8,98702.9	8,99278.7	8,99850.4	9,00417.9	9,00981.3
14	8,95768.5	8,96366.1	8,96959.3	8,97548.1	8,98132.4	8,98712.5	8,99288.3	8,99859.9	9,00427.3	9,00990.7
15	8,95778.5	8,96376.1	8,96969.2	8,97557.8	8,98142.1	8,98722.1	8,99297.8	8,99869.4	9,00436.7	9,01000.0
16	8,95788.5	8,96386.0	8,96979.0	8,97567.6	8,98151.8	8,98731.8	8,99307.4	8,99878.9	9,00446.2	9,01009.4
17	8,95798.4	8,96395.9	8,96988.9	8,97577.4	8,98161.5	8,98741.4	8,99317.0	8,99888.3	9,00455.6	9,01018.7
18	8,95808.4	8,96405.8	8,96998.7	8,97587.2	8,98171.2	8,98751.0	8,99326.5	8,99897.8	9,00465.0	9,01028.1
19	8,95818.4	8,96415.7	8,97008.6	8,97597.0	8,98180.9	8,98760.6	8,99336.1	8,99907.3	9,00474.4	9,01037.4
20	8,95828.4	8,96425.7	8,97018.4	8,97606.7	8,98190.6	8,98770.3	8,99345.6	8,99916.8	9,00483.8	9,01046.8
21	8,95838.4	8,96435.6	8,97028.2	8,97616.5	8,98200.3	8,98779.9	8,99355.2	8,99926.3	9,00493.3	9,01056.1
22	8,95848.4	8,96445.5	8,97038.1	8,97626.2	8,98210.0	8,98789.5	8,99364.7	8,99935.8	9,00502.7	9,01065.5
23	8,95858.4	8,96455.4	8,97047.9	8,97636.0	8,98219.7	8,98799.1	8,99374.3	8,99945.3	9,00512.1	9,01074.8
24	8,95868.4	8,96465.3	8,97057.8	8,97645.8	8,98229.4	8,98808.8	8,99383.8	8,99954.7	9,00521.5	9,01084.2
25	8,95878.4	8,96475.2	8,97067.6	8,97655.5	8,98239.1	8,98818.4	8,99393.4	8,99964.2	9,00530.9	9,01093.5
26	8,95888.4	8,96485.1	8,97077.4	8,97665.3	8,98248.8	8,98828.0	8,99402.9	8,99973.7	9,00540.3	9,01102.9
27	8,95898.4	8,96495.1	8,97087.3	8,97675.0	8,98258.5	8,98837.6	8,99412.5	8,99983.2	9,00549.7	9,01112.2
28	8,95908.3	8,96505.0	8,97097.1	8,97684.8	8,98268.2	8,98847.2	8,99422.0	8,99992.7	9,00559.1	9,01121.5
29	8,95918.3	8,96514.9	8,97106.9	8,97694.6	8,98277.8	8,98856.8	8,99431.6	9,00002.1	9,00568.5	9,01130.9
30	8,95928.3	8,96524.8	8,97116.8	8,97704.3	8,98287.5	8,98866.5	8,99441.1	9,00011.6	9,00578.0	9,01140.2
31	8,95938.3	8,96534.7	8,97126.6	8,97714.1	8,98297.2	8,98876.1	8,99450.7	9,00021.1	9,00587.4	9,01149.6
32	8,95948.2	8,96544.6	8,97136.4	8,97723.8	8,98306.9	8,98885.7	8,99460.2	9,00030.5	9,00596.8	9,01158.9
33	8,95958.2	8,96554.5	8,97146.2	8,97733.6	8,98316.6	8,98895.3	8,99469.7	9,00040.0	9,00606.2	9,01168.2
34	8,95968.2	8,96564.4	8,97156.1	8,97743.3	8,98326.3	8,98904.9	8,99479.3	9,00049.5	9,00615.6	9,01177.6
35	8,95978.2	8,96574.3	8,97165.9	8,97753.1	8,98335.9	8,98914.5	8,99488.8	9,00059.0	9,00625.0	9,01186.9
36	8,95988.1	8,96584.2	8,97175.7	8,97762.8	8,98345.6	8,98924.1	8,99498.4	9,00068.4	9,00634.4	9,01196.2
37	8,95998.1	8,96594.1	8,97185.5	8,97772.6	8,98355.3	8,98933.7	8,99507.9	9,00077.9	9,00643.8	9,01205.6
38	8,96008.1	8,96604.0	8,97195.3	8,97782.3	8,98365.0	8,98943.3	8,99517.5	9,00087.4	9,00653.2	9,01214.9
39	8,96018.1	8,96613.8	8,97205.2	8,97792.1	8,98374.6	8,98952.9	8,99527.0	9,00096.8	9,00662.5	9,01224.2
40	8,96028.0	8,96623.7	8,97215.0	8,97801.8	8,98384.3	8,98962.5	8,99536.5	9,00106.3	9,00671.9	9,01233.5
41	8,96038.0	8,96633.6	8,97224.8	8,97811.6	8,98394.0	8,98972.1	8,99546.0	9,00115.7	9,00681.3	9,01242.9
42	8,96048.0	8,96643.5	8,97234.6	8,97821.3	8,98403.7	8,98981.7	8,99555.5	9,00125.2	9,00690.7	9,01252.2
43	8,96057.9	8,96653.4	8,97244.4	8,97831.1	8,98413.3	8,98991.3	8,99565.1	9,00134.7	9,00700.1	9,01261.5
44	8,96067.9	8,96663.3	8,97254.2	8,97840.8	8,98423.0	8,99000.9	8,99574.6	9,00144.1	9,00709.5	9,01270.8
45	8,96077.8	8,96673.2	8,97264.1	8,97850.5	8,98432.7	8,99010.5	8,99584.1	9,00153.6	9,00718.9	9,01280.2
46	8,96087.8	8,96683.1	8,97273.9	8,97860.3	8,98442.3	8,99020.1	8,99593.7	9,00163.0	9,00728.3	9,01289.5
47	8,96097.7	8,96692.9	8,97283.7	8,97870.0	8,98452.0	8,99029.7	8,99603.2	9,00172.5	9,00737.7	9,01298.8
48	8,96107.7	8,96702.8	8,97293.5	8,97879.7	8,98461.7	8,99039.3	8,99612.7	9,00181.9	9,00747.1	9,01308.1
49	8,96117.7	8,96712.7	8,97303.3	8,97889.5	8,98471.3	8,99048.9	8,99622.2	9,00191.4	9,00756.4	9,01317.4
50	8,96127.6	8,96722.6	8,97313.1	8,97899.2	8,98481.0	8,99058.5	8,99631.7	9,00200.8	9,00765.8	9,01326.8
51	8,96137.6	8,96732.5	8,97322.9	8,97909.0	8,98490.6	8,99068.1	8,99641.3	9,00210.3	9,00775.2	9,01336.1
52	8,96147.5	8,96742.3	8,97332.7	8,97918.7	8,98500.3	8,99077.7	8,99650.8	9,00219.7	9,00784.6	9,01345.4
53	8,96157.5	8,96752.2	8,97342.5	8,97928.4	8,98510.0	8,99087.2	8,99660.3	9,00229.2	9,00794.0	9,01354.7
54	8,96167.4	8,96762.1	8,97352.3	8,97938.1	8,98519.6	8,99096.8	8,99669.8	9,00238.6	9,00803.3	9,01364.0
55	8,96177.4	8,96772.0	8,97362.1	8,97947.9	8,98529.3	8,99106.4	8,99679.3	9,00248.1	9,00812.7	9,01373.3
56	8,96187.3	8,96781.8	8,97371.9	8,97957.6	8,98538.9	8,99116.0	8,99688.8	9,00257.5	9,00822.1	9,01382.6
57	8,96197.3	8,96791.7	8,97381.7	8,97967.3	8,98548.6	8,99125.6	8,99698.4	9,00267.0	9,00831.5	9,01391.9
58	8,96207.2	8,96801.6	8,97391.5	8,97977.0	8,98558.2	8,99135.2	8,99707.9	9,00276.4	9,00840.9	9,01401.2
59	8,96217.2	8,96811.5	8,97401.3	8,97986.8	8,98567.9	8,99144.7	8,99717.4	9,00285.8	9,00850.2	9,01410.5
60	8,96227.1	8,96821.3	8,97411.1	8,97996.5	8,98577.5	8,99154.3	8,99726.9	9,00295.2	9,00859.6	9,01419.8

n	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'
	9.3	9.2	9.1	9.1	9.0	8.9	8.9	8.8	8.8	8.7
0	9,01419.8	9,01976.1	9,02528.4	9,03076.8	9,03621.3	9,04162.1	9,04699.1	9,05232.3	9,05761.9	9,06287.9
1	9,01429.1	9,01985.3	9,02537.6	9,03085.9	9,03630.4	9,04171.0	9,04708.0	9,05241.2	9,05770.7	9,06296.7
2	9,01438.4	9,01994.6	9,02546.7	9,03095.0	9,03639.4	9,04180.0	9,04716.9	9,05250.0	9,05779.5	9,06305.4
3	9,01447.7	9,02003.8	9,02555.9	9,03104.1	9,03648.5	9,04189.0	9,04725.8	9,05258.9	9,05788.3	9,06314.1
4	9,01457.0	9,02013.0	9,02565.1	9,03113.2	9,03657.5	9,04198.0	9,04734.7	9,05267.7	9,05797.1	9,06322.9
5	9,01466.3	9,02022.3	9,02574.2	9,03122.3	9,03666.5	9,04207.0	9,04743.6	9,05276.6	9,05805.9	9,06331.9
6	9,01475.6	9,02031.5	9,02583.4	9,03131.4	9,03675.6	9,04215.9	9,04752.5	9,05285.5	9,05814.7	9,06340.3
7	9,01484.9	9,02040.7	9,02592.6	9,03140.5	9,03684.6	9,04224.9	9,04761.5	9,05294.3	9,05823.5	9,06349.1
8	9,01494.2	9,02050.0	9,02601.7	9,03149.6	9,03693.6	9,04233.9	9,04770.4	9,05303.2	9,05832.3	9,06357.8
9	9,01503.5	9,02059.2	9,02610.9	9,03158.7	9,03702.7	9,04242.9	9,04779.3	9,05312.0	9,05841.1	9,06366.5
10	9,01512.8	9,02068.4	9,02620.1	9,03167.8	9,03711.7	9,04251.8	9,04788.2	9,05320.9	9,05849.9	9,06375.2
11	9,01522.1	9,02077.6	9,02629.2	9,03176.9	9,03720.7	9,04260.8	9,04797.1	9,05329.7	9,05858.6	9,06384.0
12	9,01531.4	9,02086.9	9,02638.4	9,03186.0	9,03729.8	9,04269.8	9,04806.0	9,05338.5	9,05867.4	9,06392.7
13	9,01540.7	9,02096.1	9,02647.5	9,03195.1	9,03738.8	9,04278.7	9,04814.9	9,05347.4	9,05876.2	9,06401.4
14	9,01550.0	9,02105.3	9,02656.7	9,03204.2	9,03747.8	9,04287.7	9,04823.8	9,05356.2	9,05885.0	9,06410.1
15	9,01559.3	9,02114.5	9,02665.8	9,03213.3	9,03756.9	9,04296.7	9,04832.7	9,05365.1	9,05893.8	9,06418.9
16	9,01568.6	9,02123.7	9,02675.0	9,03222.4	9,03765.9	9,04305.6	9,04841.6	9,05373.9	9,05902.6	9,06427.6
17	9,01577.8	9,02133.0	9,02684.2	9,03231.5	9,03774.9	9,04314.6	9,04850.5	9,05382.8	9,05911.3	9,06436.3
18	9,01587.1	9,02142.2	9,02693.3	9,03240.5	9,03784.0	9,04323.6	9,04859.4	9,05391.6	9,05920.1	9,06445.0
19	9,01596.4	9,02151.4	9,02702.5	9,03249.6	9,03793.0	9,04332.5	9,04868.3	9,05400.4	9,05928.9	9,06453.7
20	9,01605.7	9,02160.6	9,02711.6	9,03258.7	9,03802.0	9,04341.5	9,04877.2	9,05409.3	9,05937.7	9,06462.5
21	9,01615.0	9,02169.8	9,02720.8	9,03267.8	9,03811.0	9,04350.4	9,04886.1	9,05418.1	9,05946.4	9,06471.2
22	9,01624.3	9,02179.1	9,02729.9	9,03276.9	9,03820.0	9,04359.4	9,04895.0	9,05426.9	9,05955.2	9,06479.9
23	9,01633.5	9,02188.3	9,02739.1	9,03286.0	9,03829.1	9,04368.3	9,04903.9	9,05435.8	9,05964.0	9,06488.6
24	9,01642.8	9,02197.5	9,02748.2	9,03295.1	9,03838.1	9,04377.3	9,04912.8	9,05444.6	9,05972.8	9,06497.3
25	9,01652.1	9,02206.7	9,02757.4	9,03304.1	9,03847.1	9,04386.3	9,04921.7	9,05453.4	9,05981.5	9,06506.0
26	9,01661.4	9,02215.9	9,02766.5	9,03313.2	9,03856.1	9,04395.2	9,04930.6	9,05462.3	9,05990.3	9,06510.7
27	9,01670.6	9,02225.1	9,02775.6	9,03322.3	9,03865.1	9,04404.2	9,04939.5	9,05471.1	9,05999.1	9,06523.5
28	9,01679.9	9,02234.3	9,02784.8	9,03331.4	9,03874.1	9,04413.1	9,04948.4	9,05479.9	9,06007.8	9,06532.2
29	9,01689.2	9,02243.5	9,02793.9	9,03340.5	9,03883.2	9,04422.1	9,04957.3	9,05488.8	9,06016.6	9,06540.9
30	9,01698.5	9,02252.7	9,02803.1	9,03349.5	9,03892.2	9,04431.0	9,04966.2	9,05497.6	9,06025.4	9,06549.6
31	9,01707.7	9,02261.9	9,02812.2	9,03358.6	9,03901.2	9,04440.0	9,04975.0	9,05506.4	9,06034.2	9,06558.3
32	9,01717.0	9,02271.1	9,02821.4	9,03367.7	9,03910.2	9,04448.9	9,04983.9	9,05515.2	9,06042.9	9,06567.0
33	9,01726.3	9,02280.3	9,02830.5	9,03376.8	9,03919.2	9,04457.9	9,04992.8	9,05524.1	9,06051.7	9,06575.7
34	9,01735.5	9,02289.5	9,02839.6	9,03385.8	9,03928.2	9,04466.8	9,05001.7	9,05532.9	9,06060.4	9,06584.4
35	9,01744.8	9,02298.7	9,02848.7	9,03394.9	9,03937.2	9,04475.8	9,05010.6	9,05541.7	9,06069.2	9,06593.1
36	9,01754.1	9,02307.9	9,02857.9	9,03404.0	9,03946.2	9,04484.7	9,05019.5	9,05550.5	9,06078.0	9,06601.8
37	9,01763.3	9,02317.1	9,02867.0	9,03413.0	9,03955.2	9,04493.6	9,05028.3	9,05559.3	9,06086.7	9,06610.5
38	9,01772.6	9,02326.3	9,02876.2	9,03422.1	9,03964.2	9,04502.6	9,05037.2	9,05568.2	9,06095.5	9,06619.2
39	9,01781.9	9,02335.5	9,02885.3	9,03431.2	9,03973.2	9,04511.5	9,05046.1	9,05577.0	9,06104.2	9,06627.9
40	9,01791.1	9,02344.7	9,02894.4	9,03440.3	9,03982.2	9,04520.5	9,05055.0	9,05585.8	9,06113.0	9,06636.6
41	9,01800.4	9,02353.9	9,02903.5	9,03449.3	9,03991.2	9,04529.4	9,05063.9	9,05594.6	9,06121.8	9,06645.3
42	9,01809.6	9,02363.1	9,02912.7	9,03458.4	9,04000.2	9,04538.4	9,05072.7	9,05603.4	9,06130.5	9,06654.0
43	9,01818.9	9,02372.3	9,02921.8	9,03467.4	9,04009.2	9,04547.3	9,05081.6	9,05612.2	9,06139.3	9,06662.7
44	9,01828.1	9,02381.5	9,02930.9	9,03476.5	9,04018.2	9,04556.2	9,05090.5	9,05621.1	9,06148.0	9,06671.4
45	9,01837.4	9,02390.7	9,02940.0	9,03485.5	9,04027.2	9,04565.2	9,05099.4	9,05629.9	9,06156.8	9,06680.1
46	9,01846.7	9,02399.9	9,02949.2	9,03494.6	9,04036.2	9,04574.1	9,05108.2	9,05638.7	9,06165.5	9,06688.8
47	9,01855.9	9,02409.1	9,02958.3	9,03503.7	9,04045.2	9,04583.0	9,05117.1	9,05647.5	9,06174.3	9,06697.5
48	9,01865.2	9,02418.2	9,02967.4	9,03512.7	9,04054.2	9,04592.0	9,05126.0	9,05656.3	9,06183.0	9,06706.1
49	9,01874.4	9,02427.4	9,02976.5	9,03521.8	9,04063.2	9,04600.9	9,05134.8	9,05665.1	9,06191.8	9,06714.8
50	9,01883.7	9,02436.6	9,02985.7	9,03530.8	9,04072.2	9,04609.8	9,05143.7	9,05673.9	9,06200.5	9,06723.5
51	9,01892.9	9,02445.8	9,02994.8	9,03539.9	9,04081.2	9,04618.7	9,05152.6	9,05682.7	9,06209.3	9,06732.2
52	9,01902.1	9,02455.0	9,03003.9	9,03548.9	9,04090.2	9,04627.7	9,05161.4	9,05691.5	9,06218.0	9,06740.9
53	9,01911.4	9,02464.2	9,03013.0	9,03558.0	9,04099.2	9,04636.6	9,05170.3	9,05700.3	9,06226.7	9,06749.6
54	9,01920.6	9,02473.3	9,03022.1	9,03567.0	9,04108.2	9,04645.5	9,05179.2	9,05709.1	9,06235.5	9,06758.3
55	9,01929.9	9,02482.5	9,03031.2	9,03576.1	9,04117.2	9,04654.4	9,05188.0	9,05717.9	9,06244.2	9,06766.9
56	9,01939.1	9,02491.7	9,03040.3	9,03585.1	9,04126.1	9,04663.4	9,05196.9	9,05726.7	9,06253.0	9,06775.6
57	9,01948.4	9,02500.9	9,03049.5	9,03594.2	9,04135.1	9,04672.3	9,05205.7	9,05735.5	9,06261.7	9,06784.3
58	9,01957.6	9,02510.0	9,03058.6	9,03603.2	9,04144.1	9,04681.2	9,05214.6	9,05744.3	9,06270.5	9,06793.0
59	9,01966.8	9,02519.2	9,03067.7	9,03612.3	9,04153.1	9,04690.2	9,05223.5	9,05753.1	9,06279.2	9,06801.7
60	9,01976.1	9,02528.4	9,03076.8	9,03621.3	9,04162.1	9,04699.1	9,05232.3	9,05761.9	9,06287.9	9,06810.3

n	40' 8.6	41' 8.6	42' 8.5	43' 8.5	44' 8.4	45' 8.4	46' 8.3	47' 8.3	48' 8.2	49' 8.1
0	9,06810.3	9,07329.2	9,07844.6	9,08356.5	9,08865.1	9,09370.2	9,09872.0	9,10370.6	9,10865.8	9,11357.9
1	9,06819.0	9,07337.8	9,07853.2	9,08365.0	9,08873.5	9,09378.6	9,09880.4	9,10378.8	9,10874.1	9,11366.1
2	9,06827.7	9,07346.5	9,07861.7	9,08373.5	9,08882.0	9,09387.0	9,09888.7	9,10387.1	9,10882.3	9,11374.2
3	9,06836.4	9,07355.1	9,07870.3	9,08382.0	9,08890.4	9,09395.4	9,09897.0	9,10395.4	9,10890.5	9,11382.4
4	9,06845.0	9,07363.7	9,07878.8	9,08390.5	9,08898.8	9,09403.8	9,09905.4	9,10403.7	9,10898.7	9,11390.6
5	9,06853.7	9,07372.3	9,07887.4	9,08399.0	9,08907.3	9,09412.2	9,09913.7	9,10412.0	9,10907.0	9,11398.8
6	9,06862.4	9,07380.9	9,07896.0	9,08407.5	9,08915.7	9,09420.6	9,09922.0	9,10420.2	9,10915.2	9,11406.9
7	9,06871.1	9,07389.5	9,07904.5	9,08416.0	9,08924.2	9,09428.9	9,09930.4	9,10428.5	9,10923.4	9,11415.1
8	9,06879.7	9,07398.1	9,07913.1	9,08424.5	9,08932.6	9,09437.3	9,09938.7	9,10436.8	9,10931.6	9,11423.3
9	9,06888.4	9,07406.8	9,07921.6	9,08433.0	9,08941.0	9,09445.7	9,09947.0	9,10445.1	9,10939.8	9,11431.4
10	9,06897.1	9,07415.4	9,07930.2	9,08441.5	9,08949.5	9,09454.1	9,09955.4	9,10453.3	9,10948.1	9,11439.6
11	9,06905.7	9,07424.0	9,07938.7	9,08450.0	9,08957.9	9,09462.5	9,09963.7	9,10461.6	9,10956.3	9,11447.8
12	9,06914.4	9,07432.6	9,07947.3	9,08458.5	9,08966.4	9,09470.8	9,09972.0	9,10469.9	9,10964.5	9,11455.9
13	9,06923.1	9,07441.2	9,07955.8	9,08467.0	9,08974.8	9,09479.2	9,09980.3	9,10478.2	9,10972.7	9,11464.1
14	9,06931.7	9,07449.8	9,07964.4	9,08475.5	9,08983.2	9,09487.6	9,09988.7	9,10486.4	9,10980.9	9,11472.2
15	9,06940.4	9,07458.4	9,07972.9	9,08484.0	9,08991.7	9,09496.0	9,09997.0	9,10494.7	9,10989.1	9,11480.4
16	9,06949.0	9,07467.0	9,07981.5	9,08492.5	9,09000.1	9,09504.4	9,10005.3	9,10503.0	9,10997.4	9,11488.6
17	9,06957.7	9,07475.6	9,07990.0	9,08501.0	9,09008.5	9,09512.7	9,10013.6	9,10511.2	9,11005.6	9,11496.8
18	9,06966.4	9,07484.2	9,07998.5	9,08509.5	9,09017.0	9,09521.1	9,10021.9	9,10519.5	9,11013.8	9,11504.9
19	9,06975.0	9,07492.8	9,08007.1	9,08517.9	9,09025.4	9,09529.5	9,10030.3	9,10527.8	9,11022.0	9,11513.0
20	9,06983.7	9,07501.4	9,08015.6	9,08526.4	9,09033.8	9,09537.9	9,10038.6	9,10536.0	9,11030.2	9,11521.2
21	9,06992.3	9,07510.0	9,08024.2	9,08534.9	9,09042.2	9,09546.2	9,10046.9	9,10544.3	9,11038.4	9,11529.4
22	9,07001.0	9,07518.6	9,08032.7	9,08543.4	9,09050.1	9,09554.6	9,10055.2	9,10552.5	9,11046.6	9,11537.5
23	9,07009.6	9,07527.2	9,08041.2	9,08551.9	9,09059.1	9,09563.0	9,10063.5	9,10560.8	9,11054.8	9,11545.7
24	9,07018.3	9,07535.8	9,08049.8	9,08560.4	9,09067.5	9,09571.3	9,10071.8	9,10569.1	9,11063.0	9,11553.8
25	9,07027.0	9,07544.4	9,08058.3	9,08568.8	9,09075.9	9,09579.7	9,10080.2	9,10577.3	9,11071.2	9,11562.0
26	9,07035.6	9,07553.0	9,08066.9	9,08577.3	9,09084.4	9,09588.1	9,10088.5	9,10585.6	9,11079.5	9,11570.1
27	9,07044.3	9,07561.6	9,08075.4	9,08585.8	9,09092.8	9,09596.4	9,10096.8	9,10593.8	9,11085.7	9,11578.3
28	9,07052.9	9,07570.2	9,08083.9	9,08594.3	9,09101.2	9,09604.8	9,10105.1	9,10602.1	9,11095.9	9,11586.4
29	9,07061.6	9,07578.8	9,08092.5	9,08602.7	9,09109.6	9,09613.2	9,10113.4	9,10610.4	9,11104.1	9,11594.6
30	9,07070.2	9,07587.3	9,08101.0	9,08611.2	9,09118.1	9,09621.5	9,10121.7	9,10618.6	9,11112.3	9,11602.7
31	9,07078.9	9,07595.9	9,08109.5	9,08619.7	9,09126.5	9,09629.9	9,10130.0	9,10626.9	9,11120.5	9,11610.9
32	9,07087.5	9,07604.5	9,08118.1	9,08628.2	9,09134.9	9,09638.3	9,10138.3	9,10635.1	9,11128.7	9,11619.0
33	9,07096.1	9,07613.1	9,08126.6	9,08636.6	9,09143.3	9,09646.6	9,10146.6	9,10643.4	9,11136.9	9,11627.1
34	9,07104.8	9,07621.7	9,08135.1	9,08645.1	9,09151.7	9,09655.0	9,10154.9	9,10651.6	9,11145.1	9,11635.3
35	9,07113.4	9,07630.3	9,08143.7	9,08653.6	9,09160.1	9,09663.3	9,10163.2	9,10659.9	9,11153.2	9,11643.4
36	9,07122.1	9,07638.9	9,08152.2	9,08662.1	9,09168.6	9,09671.7	9,10171.5	9,10668.1	9,11161.4	9,11651.6
37	9,07130.7	9,07647.4	9,08160.7	9,08670.5	9,09177.0	9,09680.1	9,10179.8	9,10676.4	9,11169.6	9,11659.7
38	9,07139.4	9,07656.0	9,08169.2	9,08679.0	9,09185.4	9,09688.4	9,10188.1	9,10684.6	9,11177.8	9,11667.9
39	9,07148.0	9,07664.6	9,08177.8	9,08687.5	9,09193.8	9,09696.8	9,10196.4	9,10692.9	9,11186.0	9,11676.0
40	9,07156.6	9,07673.2	9,08186.3	9,08695.9	9,09202.2	9,09705.1	9,10204.7	9,10701.1	9,11194.2	9,11684.1
41	9,07165.3	9,07681.8	9,08194.8	9,08704.4	9,09210.6	9,09713.5	9,10213.0	9,10709.3	9,11202.4	9,11692.3
42	9,07173.9	9,07690.4	9,08203.3	9,08712.9	9,09219.0	9,09721.8	9,10221.3	9,10717.6	9,11210.6	9,11700.4
43	9,07182.6	9,07698.9	9,08211.8	9,08721.3	9,09227.4	9,09730.2	9,10229.6	9,10725.8	9,11218.8	9,11708.6
44	9,07191.2	9,07707.5	9,08220.4	9,08729.8	9,09235.8	9,09738.5	9,10237.9	9,10734.1	9,11227.0	9,11716.7
45	9,07199.8	9,07716.1	9,08228.9	9,08738.2	9,09244.2	9,09746.9	9,10246.2	9,10742.3	9,11235.2	9,11724.8
46	9,07208.5	9,07724.7	9,08237.4	9,08746.7	9,09252.6	9,09755.2	9,10254.5	9,10750.6	9,11243.4	9,11733.0
47	9,07217.1	9,07733.2	9,08245.9	9,08755.2	9,09261.0	9,09763.6	9,10262.8	9,10758.8	9,11251.6	9,11741.1
48	9,07225.7	9,07741.8	9,08254.4	9,08763.6	9,09269.4	9,09771.9	9,10271.1	9,10767.0	9,11259.7	9,11749.2
49	9,07234.4	9,07750.4	9,08262.9	9,08772.1	9,09277.8	9,09780.3	9,10279.4	9,10775.3	9,11267.9	9,11757.4
50	9,07243.0	9,07758.9	9,08271.5	9,08780.5	9,09286.3	9,09788.6	9,10287.7	9,10783.5	9,11276.1	9,11765.5
51	9,07251.6	9,07767.5	9,08280.0	9,08789.0	9,09294.7	9,09797.0	9,10296.0	9,10791.7	9,11284.3	9,11773.6
52	9,07260.2	9,07776.1	9,08288.5	9,08797.5	9,09303.1	9,09805.3	9,10304.3	9,10800.0	9,11292.5	9,11781.8
53	9,07268.9	9,07784.6	9,08297.0	9,08805.9	9,09311.5	9,09813.7	9,10312.6	9,10808.2	9,11300.6	9,11789.9
54	9,07277.5	9,07793.2	9,08305.5	9,08814.4	9,09319.9	9,09822.0	9,10320.9	9,10816.5	9,11308.8	9,11798.0
55	9,07286.1	9,07801.8	9,08314.0	9,08822.8	9,09328.2	9,09830.3	9,10329.1	9,10824.7	9,11317.0	9,11806.1
56	9,07294.7	9,07810.3	9,08322.5	9,08831.3	9,09336.6	9,09838.7	9,10337.4	9,10832.9	9,11325.2	9,11814.3
57	9,07303.4	9,07818.9	9,08331.0	9,08839.7	9,09345.0	9,09847.0	9,10345.7	9,10841.2	9,11333.4	9,11822.4
58	9,07312.0	9,07827.5	9,08339.5	9,08848.2	9,09353.4	9,09855.4	9,10354.0	9,10849.4	9,11341.5	9,11830.5
59	9,07320.6	9,07836.0	9,08348.0	9,08856.6	9,09361.8	9,09863.7	9,10362.3	9,10857.6	9,11349.7	9,11838.6
60	9,07329.2	9,07844.6	9,08356.5	9,08865.1	9,09370.2	9,09872.0	9,10370.6	9,10865.8	9,11357.9	9,11846.8

Log. Sin². $\frac{1}{2}$ l. 2⁴.

"	50' 8.1	51' 8.0	52' 8.0	53' 7.9	54' 7.9	55' 7.8	56' 7.8	57' 7.7	58' 7.7	59' 7.6
0	9,11846.8	9,12332.5	9,12815.1	9,13294.6	9,13771.1	9,14244.6	9,14715.1	9,15182.6	9,15647.3	9,16109.0
1	9,11854.9	9,12340.5	9,12823.1	9,13302.6	9,13779.0	9,14252.4	9,14722.9	9,15190.4	9,15655.0	9,16116.7
2	9,11863.0	9,12348.6	9,12831.1	9,13310.6	9,13786.9	9,14260.3	9,14730.7	9,15198.1	9,15662.7	9,16124.4
3	9,11871.1	9,12356.7	9,12839.1	9,13318.5	9,13794.8	9,14268.2	9,14738.5	9,15205.9	9,15670.4	9,16132.1
4	9,11879.2	9,12364.7	9,12847.2	9,13326.5	9,13802.8	9,14276.0	9,14746.3	9,15213.7	9,15678.1	9,16139.7
5	9,11887.3	9,12372.8	9,12855.2	9,13334.4	9,13810.7	9,14283.9	9,14754.1	9,15221.5	9,15685.9	9,16147.4
6	9,11895.5	9,12380.9	9,12863.2	9,13342.4	9,13818.6	9,14291.8	9,14762.0	9,15229.2	9,15693.6	9,16155.1
7	9,11903.6	9,12388.9	9,12871.2	9,13350.4	9,13826.5	9,14299.6	9,14769.8	9,15237.0	9,15701.3	9,16162.7
8	9,11911.7	9,12397.0	9,12879.2	9,13358.3	9,13834.4	9,14307.5	9,14777.6	9,15244.8	9,15709.0	9,16170.4
9	9,11919.8	9,12405.1	9,12887.2	9,13366.3	9,13842.3	9,14315.3	9,14785.4	9,15252.5	9,15716.7	9,16178.3
10	9,11927.9	9,12413.1	9,12895.2	9,13374.2	9,13850.2	9,14323.2	9,14793.2	9,15260.3	9,15724.4	9,16185.7
11	9,11936.0	9,12421.2	9,12903.2	9,13382.2	9,13858.1	9,14331.1	9,14801.0	9,15268.0	9,15732.1	9,16193.4
12	9,11944.1	9,12429.2	9,12911.2	9,13390.2	9,13866.0	9,14338.9	9,14808.8	9,15275.8	9,15739.9	9,16201.0
13	9,11952.3	9,12437.3	9,12919.2	9,13398.1	9,13873.9	9,14346.8	9,14816.6	9,15283.6	9,15747.6	9,16208.7
14	9,11960.4	9,12445.4	9,12927.3	9,13406.1	9,13881.9	9,14354.6	9,14824.4	9,15291.3	9,15755.3	9,16216.4
15	9,11968.5	9,12453.4	9,12935.3	9,13414.0	9,13889.8	9,14362.5	9,14832.2	9,15299.1	9,15763.0	9,16224.0
16	9,11976.6	9,12461.5	9,12943.3	9,13422.0	9,13897.7	9,14370.3	9,14840.1	9,15306.8	9,15770.7	9,16231.7
17	9,11984.7	9,12469.5	9,12951.3	9,13429.9	9,13905.6	9,14378.2	9,14847.9	9,15314.6	9,15778.4	9,16239.5
18	9,11992.8	9,12477.6	9,12959.3	9,13437.9	9,13913.5	9,14386.0	9,14855.7	9,15322.3	9,15786.1	9,16247.0
19	9,12000.9	9,12485.6	9,12967.3	9,13445.8	9,13921.4	9,14393.9	9,14863.5	9,15330.1	9,15793.8	9,16254.7
20	9,12009.0	9,12493.7	9,12975.3	9,13453.8	9,13929.3	9,14401.7	9,14871.3	9,15337.8	9,15801.5	9,16262.3
21	9,12017.1	9,12501.8	9,12983.3	9,13461.7	9,13937.2	9,14409.6	9,14879.1	9,15345.6	9,15809.2	9,16270.0
22	9,12025.2	9,12509.8	9,12991.3	9,13469.7	9,13945.1	9,14417.4	9,14886.9	9,15353.3	9,15816.9	9,16277.6
23	9,12033.3	9,12517.9	9,12999.3	9,13477.6	9,13953.0	9,14425.3	9,14894.7	9,15361.1	9,15824.6	9,16285.3
24	9,12041.4	9,12525.9	9,13007.3	9,13485.6	9,13960.9	9,14433.1	9,14902.5	9,15368.8	9,15832.3	9,16292.9
25	9,12049.5	9,12533.9	9,13015.3	9,13493.5	9,13968.8	9,14441.0	9,14910.3	9,15376.6	9,15840.0	9,16300.6
26	9,12057.6	9,12542.0	9,13023.3	9,13501.5	9,13976.7	9,14448.8	9,14918.1	9,15384.3	9,15847.7	9,16308.2
27	9,12065.7	9,12550.0	9,13031.2	9,13509.4	9,13984.5	9,14456.7	9,14925.8	9,15392.1	9,15855.4	9,16315.9
28	9,12073.8	9,12558.1	9,13039.2	9,13517.4	9,13992.4	9,14464.5	9,14933.6	9,15399.8	9,15863.1	9,16323.5
29	9,12081.9	9,12566.1	9,13047.2	9,13525.3	9,14000.3	9,14472.4	9,14941.4	9,15407.6	9,15870.8	9,16331.2
30	9,12090.0	9,12574.2	9,13055.2	9,13533.2	9,14008.2	9,14480.2	9,14949.2	9,15415.3	9,15878.5	9,16338.8
31	9,12098.1	9,12582.2	9,13063.2	9,13541.2	9,14016.1	9,14488.0	9,14957.0	9,15423.1	9,15886.2	9,16346.4
32	9,12106.2	9,12590.3	9,13071.2	9,13549.1	9,14024.0	9,14495.9	9,14964.8	9,15430.8	9,15893.9	9,16354.1
33	9,12114.3	9,12598.3	9,13079.2	9,13557.1	9,14031.9	9,14503.7	9,14972.6	9,15438.5	9,15901.6	9,16361.8
34	9,12122.4	9,12606.3	9,13087.2	9,13565.0	9,14039.8	9,14511.6	9,14980.4	9,15446.3	9,15909.3	9,16369.4
35	9,12130.5	9,12614.4	9,13095.2	9,13572.9	9,14047.7	9,14519.4	9,14988.2	9,15454.0	9,15917.0	9,16377.1
36	9,12138.6	9,12622.4	9,13103.2	9,13580.9	9,14055.6	9,14527.2	9,14996.0	9,15461.8	9,15924.7	9,16384.7
37	9,12146.7	9,12630.5	9,13111.2	9,13588.8	9,14063.4	9,14535.1	9,15003.8	9,15469.5	9,15932.4	9,16392.4
38	9,12154.7	9,12638.5	9,13119.2	9,13596.8	9,14071.3	9,14542.9	9,15011.5	9,15477.2	9,15940.1	9,16400.0
39	9,12162.8	9,12646.5	9,13127.1	9,13604.7	9,14079.2	9,14550.7	9,15019.3	9,15485.0	9,15947.8	9,16407.6
40	9,12170.9	9,12654.6	9,13135.1	9,13612.6	9,14087.1	9,14558.6	9,15027.1	9,15492.7	9,15955.4	9,16415.3
41	9,12179.0	9,12662.6	9,13143.1	9,13620.6	9,14095.0	9,14566.4	9,15034.9	9,15500.5	9,15963.1	9,16422.9
42	9,12187.1	9,12670.6	9,13151.1	9,13628.5	9,14102.9	9,14574.2	9,15042.7	9,15508.2	9,15970.8	9,16430.6
43	9,12195.2	9,12678.7	9,13159.1	9,13636.4	9,14110.7	9,14582.1	9,15050.5	9,15515.9	9,15978.5	9,16438.2
44	9,12203.3	9,12686.7	9,13167.0	9,13644.3	9,14118.6	9,14589.9	9,15058.2	9,15523.7	9,15986.2	9,16445.8
45	9,12211.3	9,12694.7	9,13175.0	9,13652.3	9,14126.5	9,14597.7	9,15066.0	9,15531.4	9,15993.9	9,16453.5
46	9,12219.4	9,12702.8	9,13183.0	9,13660.2	9,14134.4	9,14605.6	9,15073.8	9,15539.1	9,16001.5	9,16461.1
47	9,12227.5	9,12710.8	9,13191.0	9,13668.1	9,14142.2	9,14613.4	9,15081.6	9,15546.9	9,16009.2	9,16468.7
48	9,12235.6	9,12718.8	9,13199.0	9,13676.1	9,14150.1	9,14621.2	9,15089.4	9,15554.6	9,16016.9	9,16476.4
49	9,12243.7	9,12726.8	9,13206.9	9,13684.0	9,14158.0	9,14629.0	9,15097.1	9,15562.3	9,16024.6	9,16484.0
50	9,12251.7	9,12734.9	9,13214.9	9,13691.9	9,14165.9	9,14636.9	9,15104.9	9,15570.0	9,16032.3	9,16491.6
51	9,12259.8	9,12742.9	9,13222.9	9,13699.8	9,14173.7	9,14644.7	9,15112.7	9,15577.8	9,16039.9	9,16499.3
52	9,12267.9	9,12750.9	9,13230.9	9,13707.7	9,14181.6	9,14652.5	9,15120.5	9,15585.5	9,16047.6	9,16506.9
53	9,12276.0	9,12758.9	9,13238.8	9,13715.7	9,14189.5	9,14660.3	9,15128.2	9,15593.2	9,16055.3	9,16514.5
54	9,12284.1	9,12767.0	9,13246.8	9,13723.6	9,14197.4	9,14668.2	9,15136.0	9,15600.9	9,16063.0	9,16522.2
55	9,12292.1	9,12775.0	9,13254.8	9,13731.5	9,14205.2	9,14676.0	9,15143.8	9,15608.7	9,16070.7	9,16529.8
56	9,12300.2	9,12783.0	9,13262.7	9,13739.4	9,14213.1	9,14683.8	9,15151.6	9,15616.4	9,16078.3	9,16537.4
57	9,12308.3	9,12791.0	9,13270.7	9,13747.4	9,14221.0	9,14691.6	9,15159.3	9,15624.1	9,16086.0	9,16545.1
58	9,12316.3	9,12799.0	9,13278.7	9,13755.3	9,14228.9	9,14699.4	9,15167.1	9,15631.8	9,16093.7	9,16552.7
59	9,12324.4	9,12807.1	9,13286.7	9,13763.2	9,14236.7	9,14707.3	9,15174.9	9,15639.6	9,16101.4	9,16560.3
60	9,12332.5	9,12815.1	9,13294.6	9,13771.1	9,14244.6	9,14715.1	9,15182.6	9,15647.3	9,16109.0	9,16567.9

"	0' 7.6	1' 7.6	2' 7.5	3' 7.5	4' 7.4	5' 7.4	6' 7.3	7' 7.3	8' 7.2	9' 7.2
0	9,16567.9	9,17024.0	9,17477.3	9,17927.8	9,18375.6	9,18820.7	9,19263.1	9,19702.8	9,20139.9	9,20574.5
1	9,16575.6	9,17031.6	9,17484.8	9,17935.3	9,18383.0	9,18828.1	9,19270.4	9,19710.1	9,20147.2	9,20581.7
2	9,16583.2	9,17039.2	9,17492.4	9,17942.8	9,18390.5	9,18835.5	9,19277.8	9,19717.4	9,20154.5	9,20588.9
3	9,16590.8	9,17046.7	9,17499.9	9,17950.3	9,18397.9	9,18842.9	9,19285.1	9,19724.7	9,20161.7	9,20596.1
4	9,16598.4	9,17054.3	9,17507.4	9,17957.8	9,18405.4	9,18850.3	9,19292.5	9,19732.0	9,20169.0	9,20603.3
5	9,16606.0	9,17061.9	9,17515.0	9,17965.2	9,18412.8	9,18857.7	9,19299.8	9,19739.3	9,20176.2	9,20610.5
6	9,16613.7	9,17069.5	9,17522.5	9,17972.7	9,18420.2	9,18865.0	9,19307.2	9,19746.7	9,20183.5	9,20617.8
7	9,16621.3	9,17077.0	9,17530.0	9,17980.2	9,18427.7	9,18872.4	9,19314.5	9,19754.0	9,20190.8	9,20625.0
8	9,16628.9	9,17084.6	9,17537.5	9,17987.7	9,18435.1	9,18879.8	9,19321.9	9,19761.3	9,20198.0	9,20632.2
9	9,16636.5	9,17092.2	9,17545.1	9,17995.2	9,18442.5	9,18887.2	9,19329.2	9,19768.6	9,20205.3	9,20639.4
10	9,16644.1	9,17099.7	9,17552.6	9,18002.6	9,18450.0	9,18894.6	9,19336.6	9,19775.9	9,20212.5	9,20646.6
11	9,16651.8	9,17107.3	9,17560.1	9,18010.1	9,18457.4	9,18902.0	9,19343.9	9,19783.2	9,20219.8	9,20653.8
12	9,16659.4	9,17114.9	9,17567.6	9,18017.6	9,18464.8	9,18909.4	9,19351.2	9,19790.5	9,20227.0	9,20661.0
13	9,16667.0	9,17122.5	9,17575.1	9,18025.1	9,18472.3	9,18916.8	9,19358.6	9,19797.8	9,20234.3	9,20668.3
14	9,16674.6	9,17130.0	9,17582.7	9,18032.5	9,18479.7	9,18924.1	9,19365.9	9,19805.1	9,20241.6	9,20675.5
15	9,16682.2	9,17137.6	9,17590.2	9,18040.0	9,18487.1	9,18931.5	9,19373.3	9,19812.3	9,20248.8	9,20682.7
16	9,16689.8	9,17145.2	9,17597.7	9,18047.5	9,18494.6	9,18938.9	9,19380.6	9,19819.6	9,20256.1	9,20689.9
17	9,16697.4	9,17152.7	9,17605.2	9,18055.0	9,18502.0	9,18946.3	9,19387.9	9,19826.9	9,20263.3	9,20697.1
18	9,16705.1	9,17160.3	9,17612.7	9,18062.4	9,18509.4	9,18953.7	9,19395.3	9,19834.2	9,20270.6	9,20704.3
19	9,16712.7	9,17167.9	9,17620.3	9,18069.9	9,18516.8	9,18961.1	9,19402.6	9,19841.5	9,20277.8	9,20711.5
20	9,16720.3	9,17175.4	9,17627.8	9,18077.4	9,18524.3	9,18968.4	9,19410.0	9,19848.8	9,20285.1	9,20718.7
21	9,16727.9	9,17183.0	9,17635.3	9,18084.9	9,18531.7	9,18975.8	9,19417.3	9,19856.1	9,20292.3	9,20725.9
22	9,16735.5	9,17190.5	9,17642.8	9,18092.3	9,18539.1	9,18983.2	9,19424.6	9,19863.4	9,20299.6	9,20733.1
23	9,16743.1	9,17198.1	9,17650.3	9,18099.8	9,18546.5	9,18990.6	9,19432.0	9,19870.7	9,20306.8	9,20740.3
24	9,16750.7	9,17205.7	9,17657.8	9,18107.3	9,18554.0	9,18997.9	9,19439.3	9,19878.0	9,20314.1	9,20747.5
25	9,16758.3	9,17213.2	9,17665.4	9,18114.7	9,18561.4	9,19005.3	9,19446.6	9,19885.3	9,20321.3	9,20754.7
26	9,16765.9	9,17220.8	9,17672.9	9,18122.2	9,18568.8	9,19012.7	9,19454.0	9,19892.6	9,20328.6	9,20761.9
27	9,16773.5	9,17228.4	9,17680.4	9,18129.7	9,18576.2	9,19020.1	9,19461.3	9,19899.9	9,20335.8	9,20769.1
28	9,16781.1	9,17235.9	9,17687.9	9,18137.1	9,18583.6	9,19027.5	9,19468.6	9,19907.1	9,20343.0	9,20776.3
29	9,16788.7	9,17243.5	9,17695.4	9,18144.6	9,18591.1	9,19034.8	9,19476.0	9,19914.4	9,20350.3	9,20783.5
30	9,16796.3	9,17251.0	9,17702.9	9,18152.1	9,18598.5	9,19042.2	9,19483.3	9,19921.7	9,20357.5	9,20790.7
31	9,16803.9	9,17258.6	9,17710.4	9,18159.5	9,18605.9	9,19049.6	9,19490.6	9,19929.0	9,20364.8	9,20797.9
32	9,16811.5	9,17266.1	9,17717.9	9,18167.0	9,18613.3	9,19057.0	9,19497.9	9,19936.3	9,20372.0	9,20805.1
33	9,16819.1	9,17273.7	9,17725.4	9,18174.4	9,18620.7	9,19064.3	9,19505.3	9,19943.6	9,20379.3	9,20812.3
34	9,16826.7	9,17281.2	9,17732.9	9,18181.9	9,18628.1	9,19071.7	9,19512.6	9,19950.8	9,20386.5	9,20819.5
35	9,16834.3	9,17288.8	9,17740.4	9,18189.4	9,18635.6	9,19079.1	9,19519.9	9,19958.1	9,20393.7	9,20826.7
36	9,16841.9	9,17296.3	9,17747.9	9,18196.8	9,18643.0	9,19086.4	9,19527.3	9,19965.4	9,20401.0	9,20833.9
37	9,16849.5	9,17303.9	9,17755.4	9,18204.3	9,18650.4	9,19093.8	9,19534.6	9,19972.7	9,20408.2	9,20841.1
38	9,16857.1	9,17311.4	9,17762.9	9,18211.7	9,18657.8	9,19101.2	9,19541.9	9,19980.0	9,20415.4	9,20848.3
39	9,16864.7	9,17319.0	9,17770.4	9,18219.2	9,18665.2	9,19108.5	9,19549.2	9,19987.3	9,20422.7	9,20855.5
40	9,16872.3	9,17326.5	9,17777.9	9,18226.6	9,18672.6	9,19115.9	9,19556.6	9,19994.5	9,20429.9	9,20862.7
41	9,16879.9	9,17334.1	9,17785.4	9,18234.1	9,18680.0	9,19123.3	9,19563.9	9,20001.8	9,20437.1	9,20869.9
42	9,16887.5	9,17341.6	9,17792.9	9,18241.6	9,18687.4	9,19130.6	9,19571.2	9,20009.1	9,20444.4	9,20877.1
43	9,16895.1	9,17349.2	9,17800.4	9,18249.0	9,18694.9	9,19138.0	9,19578.5	9,20016.4	9,20451.6	9,20884.3
44	9,16902.7	9,17356.7	9,17807.9	9,18256.5	9,18702.3	9,19145.3	9,19585.8	9,20023.6	9,20458.8	9,20891.5
45	9,16910.3	9,17364.2	9,17815.4	9,18263.9	9,18709.7	9,19152.7	9,19593.1	9,20030.9	9,20466.1	9,20898.7
46	9,16917.8	9,17371.8	9,17822.9	9,18271.4	9,18717.1	9,19160.1	9,19600.5	9,20038.2	9,20473.3	9,20905.8
47	9,16925.4	9,17379.3	9,17830.4	9,18278.8	9,18724.5	9,19167.5	9,19607.8	9,20045.4	9,20480.5	9,20913.0
48	9,16933.0	9,17386.9	9,17837.9	9,18286.3	9,18731.9	9,19174.8	9,19615.1	9,20052.7	9,20487.8	9,20920.2
49	9,16940.6	9,17394.4	9,17845.4	9,18293.7	9,18739.3	9,19182.2	9,19622.4	9,20060.0	9,20495.0	9,20927.4
50	9,16948.2	9,17401.9	9,17852.9	9,18301.2	9,18746.7	9,19189.5	9,19629.7	9,20067.3	9,20502.2	9,20934.6
51	9,16955.8	9,17409.5	9,17860.4	9,18308.6	9,18754.1	9,19196.9	9,19637.0	9,20074.5	9,20509.4	9,20941.8
52	9,16963.4	9,17417.0	9,17867.9	9,18316.1	9,18761.5	9,19204.2	9,19644.3	9,20081.7	9,20516.7	9,20949.0
53	9,16970.9	9,17424.6	9,17875.4	9,18323.5	9,18768.9	9,19211.6	9,19651.7	9,20089.0	9,20523.9	9,20956.1
54	9,16978.5	9,17432.1	9,17882.9	9,18330.9	9,18776.3	9,19219.0	9,19659.0	9,20096.3	9,20531.1	9,20963.3
55	9,16986.1	9,17439.6	9,17890.4	9,18338.4	9,18783.7	9,19226.3	9,19666.3	9,20103.6	9,20538.3	9,20970.5
56	9,16993.7	9,17447.2	9,17897.9	9,18345.8	9,18791.1	9,19233.7	9,19673.6	9,20110.9	9,20545.6	9,20977.7
57	9,17001.3	9,17454.7	9,17905.4	9,18353.3	9,18798.5	9,19241.0	9,19680.9	9,20118.2	9,20552.8	9,20984.9
58	9,17008.9	9,17462.2	9,17912.9	9,18360.7	9,18805.9	9,19248.4	9,19688.2	9,20125.4	9,20560.0	9,20992.0
59	9,17016.4	9,17469.8	9,17920.3	9,18368.2	9,18813.3	9,19255.7	9,19695.5	9,20132.7	9,20567.2	9,20999.4
60	9,17024.0	9,17477.3	9,17927.8	9,18375.6	9,18820.7	9,19263.1	9,19702.8	9,20139.9	9,20574.5	9,21006.2

Log. Sin. $\frac{1}{2}$ 3°.

n	10' 7.2	11' 7.1	12' 7.1	13' 7.0	14' 7.0	15' 6.9	16' 6.9	17' 6.9	18' 6.8	19' 6.8
0	9,21006.4	9,21435.8	9,21862.7	9,22287.0	9,22708.9	9,23128.4	9,23545.4	9,23960.0	9,24372.2	9,24782.1
1	9,21013.6	9,21443.0	9,21869.8	9,22294.1	9,22715.9	9,23135.4	9,23552.3	9,23966.9	9,24379.1	9,24788.9
2	9,21020.8	9,21450.1	9,21876.9	9,22301.1	9,22723.0	9,23142.3	9,23559.3	9,23973.8	9,24385.9	9,24795.7
3	9,21027.9	9,21457.2	9,21884.0	9,22308.2	9,22730.0	9,23149.3	9,23566.2	9,23980.7	9,24392.8	9,24802.6
4	9,21035.1	9,21464.3	9,21891.0	9,22315.2	9,22737.0	9,23156.2	9,23573.1	9,23987.6	9,24399.6	9,24809.4
5	9,21042.3	9,21471.5	9,21898.1	9,22322.3	9,22744.0	9,23163.2	9,23580.0	9,23994.5	9,24406.5	9,24816.2
6	9,21049.5	9,21478.6	9,21905.2	9,22329.3	9,22751.0	9,23170.2	9,23587.0	9,24001.3	9,24413.3	9,24823.0
7	9,21056.6	9,21485.7	9,21912.3	9,22336.4	9,22758.0	9,23177.1	9,23593.9	9,24008.2	9,24420.2	9,24829.8
8	9,21063.8	9,21492.9	9,21919.4	9,22343.4	9,22765.0	9,23184.1	9,23600.8	9,24015.1	9,24427.0	9,24836.6
9	9,21071.0	9,21500.0	9,21926.5	9,22350.5	9,22772.0	9,23191.1	9,23607.7	9,24022.0	9,24433.9	9,24843.4
10	9,21078.1	9,21507.1	9,21933.6	9,22357.5	9,22779.0	9,23198.0	9,23614.7	9,24028.9	9,24440.7	9,24850.2
11	9,21085.3	9,21514.2	9,21940.7	9,22364.6	9,22786.0	9,23205.0	9,23621.6	9,24035.8	9,24447.6	9,24857.0
12	9,21092.5	9,21521.4	9,21947.7	9,22371.6	9,22793.0	9,23212.0	9,23628.5	9,24042.6	9,24454.4	9,24863.8
13	9,21099.7	9,21528.5	9,21954.8	9,22378.6	9,22800.0	9,23219.0	9,23635.4	9,24049.5	9,24461.2	9,24870.6
14	9,21106.8	9,21535.6	9,21961.9	9,22385.7	9,22807.0	9,23225.9	9,23642.4	9,24056.4	9,24468.1	9,24877.4
15	9,21114.0	9,21542.7	9,21969.0	9,22392.7	9,22814.0	9,23232.9	9,23649.3	9,24063.3	9,24474.9	9,24884.2
16	9,21121.1	9,21549.9	9,21976.1	9,22399.8	9,22821.0	9,23239.8	9,23656.2	9,24070.2	9,24481.8	9,24891.0
17	9,21128.3	9,21557.0	9,21983.2	9,22406.8	9,22828.0	9,23246.8	9,23663.1	9,24077.0	9,24488.6	9,24897.8
18	9,21135.5	9,21564.1	9,21990.2	9,22413.9	9,22835.0	9,23253.7	9,23670.0	9,24083.9	9,24495.4	9,24904.6
19	9,21142.6	9,21571.2	9,21997.3	9,22420.9	9,22842.0	9,23260.7	9,23677.0	9,24090.8	9,24502.3	9,24911.4
20	9,21149.8	9,21578.4	9,22004.4	9,22427.9	9,22849.0	9,23267.6	9,23683.9	9,24097.7	9,24509.1	9,24918.2
21	9,21157.0	9,21585.5	9,22011.5	9,22435.0	9,22856.0	9,23274.6	9,23690.8	9,24104.6	9,24516.0	9,24925.0
22	9,21164.1	9,21592.6	9,22018.6	9,22442.0	9,22863.0	9,23281.6	9,23697.7	9,24111.4	9,24522.8	9,24931.8
23	9,21171.3	9,21599.7	9,22025.6	9,22449.1	9,22870.0	9,23288.5	9,23704.6	9,24118.3	9,24529.6	9,24938.6
24	9,21178.5	9,21606.8	9,22032.7	9,22456.1	9,22877.0	9,23295.5	9,23711.5	9,24125.2	9,24536.5	9,24945.4
25	9,21185.6	9,21614.0	9,22039.8	9,22463.1	9,22884.0	9,23302.4	9,23718.4	9,24132.1	9,24543.3	9,24952.2
26	9,21192.8	9,21621.1	9,22046.9	9,22470.2	9,22891.0	9,23309.4	9,23725.4	9,24138.9	9,24550.1	9,24959.0
27	9,21199.9	9,21628.2	9,22054.0	9,22477.2	9,22898.0	9,23316.3	9,23732.3	9,24145.8	9,24557.0	9,24965.8
28	9,21207.1	9,21635.3	9,22061.0	9,22484.2	9,22905.0	9,23323.3	9,23739.2	9,24152.7	9,24563.8	9,24972.6
29	9,21214.3	9,21642.4	9,22068.1	9,22491.3	9,22912.0	9,23330.2	9,23746.1	9,24159.6	9,24570.6	9,24979.4
30	9,21221.4	9,21649.5	9,22075.2	9,22498.3	9,22919.0	9,23337.2	9,23753.0	9,24166.4	9,24577.5	9,24986.2
31	9,21228.6	9,21656.7	9,22082.2	9,22505.3	9,22926.0	9,23344.1	9,23759.9	9,24173.3	9,24584.3	9,24993.0
32	9,21235.7	9,21663.8	9,22089.3	9,22512.3	9,22932.9	9,23351.1	9,23766.8	9,24180.2	9,24591.1	9,24999.8
33	9,21242.9	9,21670.9	9,22096.4	9,22519.4	9,22939.9	9,23358.0	9,23773.7	9,24187.0	9,24598.0	9,25006.6
34	9,21250.0	9,21678.0	9,22103.4	9,22526.4	9,22946.9	9,23365.0	9,23780.6	9,24193.9	9,24604.8	9,25013.3
35	9,21257.2	9,21685.1	9,22110.5	9,22533.4	9,22953.9	9,23371.9	9,23787.5	9,24200.8	9,24611.6	9,25020.1
36	9,21264.3	9,21692.2	9,22117.6	9,22540.5	9,22960.9	9,23378.9	9,23794.4	9,24207.6	9,24618.4	9,25026.9
37	9,21271.5	9,21699.3	9,22124.7	9,22547.5	9,22967.9	9,23385.8	9,23801.4	9,24214.5	9,24625.3	9,25033.7
38	9,21278.6	9,21706.4	9,22131.7	9,22554.5	9,22974.9	9,23392.8	9,23808.3	9,24221.4	9,24632.1	9,25040.5
39	9,21285.8	9,21713.5	9,22138.8	9,22561.5	9,22981.8	9,23399.7	9,23815.2	9,24228.2	9,24638.9	9,25047.3
40	9,21292.9	9,21720.6	9,22145.9	9,22568.6	9,22988.8	9,23406.7	9,23822.1	9,24235.1	9,24645.7	9,25054.1
41	9,21300.1	9,21727.8	9,22153.0	9,22575.6	9,22995.8	9,23413.6	9,23829.0	9,24242.0	9,24652.6	9,25060.9
42	9,21307.2	9,21734.9	9,22160.0	9,22582.6	9,23002.8	9,23420.5	9,23835.9	9,24248.8	9,24659.4	9,25067.6
43	9,21314.4	9,21742.0	9,22167.1	9,22589.6	9,23009.8	9,23427.5	9,23842.8	9,24255.7	9,24666.2	9,25074.4
44	9,21321.5	9,21749.1	9,22174.1	9,22596.7	9,23016.8	9,23434.4	9,23849.7	9,24262.5	9,24673.0	9,25081.2
45	9,21328.7	9,21756.2	9,22181.2	9,22603.7	9,23023.7	9,23441.4	9,23856.6	9,24269.4	9,24679.9	9,25088.0
46	9,21335.8	9,21763.3	9,22188.2	9,22610.7	9,23030.7	9,23448.3	9,23863.5	9,24276.3	9,24686.7	9,25094.8
47	9,21343.0	9,21770.4	9,22195.3	9,22617.7	9,23037.7	9,23455.2	9,23870.4	9,24283.1	9,24693.5	9,25101.6
48	9,21350.1	9,21777.5	9,22202.4	9,22624.7	9,23044.7	9,23462.2	9,23877.3	9,24290.0	9,24700.3	9,25108.3
49	9,21357.3	9,21784.6	9,22209.4	9,22631.8	9,23051.6	9,23469.1	9,23884.2	9,24296.8	9,24707.1	9,25115.1
50	9,21364.4	9,21791.7	9,22216.5	9,22638.8	9,23058.6	9,23476.1	9,23891.1	9,24303.7	9,24714.0	9,25121.9
51	9,21371.5	9,21798.8	9,22223.5	9,22645.8	9,23065.6	9,23483.0	9,23898.0	9,24310.6	9,24720.8	9,25128.7
52	9,21378.7	9,21805.9	9,22230.6	9,22652.8	9,23072.6	9,23489.9	9,23904.9	9,24317.4	9,24727.6	9,25135.4
53	9,21385.8	9,21813.0	9,22237.7	9,22659.8	9,23079.6	9,23496.9	9,23911.8	9,24324.3	9,24734.4	9,25142.2
54	9,21393.0	9,21820.1	9,22244.7	9,22666.9	9,23086.5	9,23503.8	9,23918.7	9,24331.1	9,24741.2	9,25149.0
55	9,21400.1	9,21827.2	9,22251.8	9,22673.9	9,23093.5	9,23510.7	9,23925.5	9,24338.0	9,24748.0	9,25155.8
56	9,21407.2	9,21834.3	9,22258.8	9,22680.9	9,23100.5	9,23517.7	9,23932.4	9,24344.8	9,24754.8	9,25162.6
57	9,21414.4	9,21841.4	9,22265.9	9,22687.9	9,23107.5	9,23524.6	9,23939.3	9,24351.7	9,24761.6	9,25169.3
58	9,21421.5	9,21848.5	9,22273.0	9,22694.9	9,23114.4	9,23531.5	9,23946.2	9,24358.5	9,24768.5	9,25176.1
59	9,21428.6	9,21855.6	9,22280.0	9,22701.9	9,23121.4	9,23538.5	9,23953.1	9,24365.4	9,24775.3	9,25182.9
60	9,21435.8	9,21862.7	9,22287.0	9,22708.9	9,23128.4	9,23545.4	9,23960.0	9,24372.2	9,24782.1	9,25189.7

"	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'
	6.8	6.7	6.7	6.6	6.6	6.6	6.5	6.5	6.5	6.4
0	9,25189.7	9,25594.9	9,25997.8	9,26398.5	9,26796.9	9,27193.0	9,27587.0	9,27978.8	9,28368.4	9,28755.8
1	9,25196.4	9,25601.6	9,26004.5	9,26405.1	9,26803.5	9,27199.6	9,27593.6	9,27985.3	9,28374.9	9,28762.3
2	9,25203.2	9,25608.4	9,26011.2	9,26411.8	9,26810.1	9,27206.2	9,27600.1	9,27991.8	9,28381.3	9,28768.7
3	9,25210.0	9,25615.1	9,26017.9	9,26418.4	9,26816.7	9,27212.8	9,27606.7	9,27998.3	9,28387.8	9,28775.2
4	9,25216.7	9,25621.8	9,26024.6	9,26425.1	9,26823.4	9,27219.4	9,27613.2	9,28004.8	9,28394.3	9,28781.6
5	9,25223.5	9,25628.5	9,26031.3	9,26431.8	9,26830.0	9,27226.0	9,27619.8	9,28011.3	9,28400.8	9,28788.0
6	9,25230.3	9,25635.3	9,26038.0	9,26438.4	9,26836.6	9,27232.5	9,27626.3	9,28017.8	9,28407.2	9,28794.5
7	9,25237.0	9,25642.0	9,26044.7	9,26445.1	9,26843.2	9,27239.1	9,27632.8	9,28024.4	9,28413.7	9,28800.9
8	9,25243.8	9,25648.7	9,26051.4	9,26451.7	9,26849.8	9,27245.7	9,27639.4	9,28030.9	9,28420.2	9,28807.3
9	9,25250.6	9,25655.4	9,26058.0	9,26458.4	9,26856.4	9,27252.3	9,27645.9	9,28037.4	9,28426.7	9,28813.8
10	9,25257.4	9,25662.2	9,26064.7	9,26465.0	9,26863.1	9,27258.9	9,27652.5	9,28043.9	9,28433.1	9,28820.2
11	9,25264.1	9,25668.9	9,26071.4	9,26471.7	9,26869.7	9,27265.4	9,27659.0	9,28050.4	9,28439.6	9,28826.6
12	9,25270.9	9,25675.6	9,26078.1	9,26478.3	9,26876.3	9,27272.0	9,27665.5	9,28056.9	9,28446.1	9,28833.1
13	9,25277.6	9,25682.4	9,26084.8	9,26485.0	9,26882.9	9,27278.6	9,27672.1	9,28063.4	9,28452.5	9,28839.5
14	9,25284.4	9,25689.1	9,26091.5	9,26491.6	9,26889.5	9,27285.2	9,27678.6	9,28069.9	9,28459.0	9,28846.0
15	9,25291.2	9,25695.8	9,26098.2	9,26498.3	9,26896.1	9,27291.8	9,27685.2	9,28076.4	9,28465.5	9,28852.4
16	9,25297.9	9,25702.5	9,26104.9	9,26504.9	9,26902.7	9,27298.3	9,27691.7	9,28082.9	9,28471.9	9,28858.8
17	9,25304.7	9,25709.3	9,26111.6	9,26511.6	9,26909.4	9,27304.9	9,27698.2	9,28089.4	9,28478.4	9,28865.2
18	9,25311.5	9,25716.0	9,26118.2	9,26518.2	9,26916.0	9,27311.5	9,27704.6	9,28095.9	9,28484.9	9,28871.7
19	9,25318.2	9,25722.7	9,26124.9	9,26524.9	9,26922.6	9,27318.0	9,27711.3	9,28102.4	9,28491.3	9,28878.1
20	9,25325.0	9,25729.4	9,26131.6	9,26531.5	9,26929.2	9,27324.6	9,27717.8	9,28108.9	9,28497.8	9,28884.5
21	9,25331.7	9,25736.2	9,26138.3	9,26538.2	9,26935.8	9,27331.2	9,27724.4	9,28115.4	9,28504.2	9,28891.0
22	9,25338.5	9,25742.9	9,26145.0	9,26544.8	9,26942.4	9,27337.8	9,27730.9	9,28121.9	9,28510.7	9,28897.4
23	9,25345.3	9,25749.6	9,26151.7	9,26551.5	9,26949.0	9,27344.3	9,27737.5	9,28128.4	9,28517.2	9,28903.8
24	9,25352.0	9,25756.3	9,26158.3	9,26558.1	9,26955.6	9,27350.9	9,27744.0	9,28134.9	9,28523.6	9,28910.2
25	9,25358.8	9,25763.0	9,26165.0	9,26564.7	9,26962.2	9,27357.5	9,27750.5	9,28141.4	9,28530.1	9,28916.7
26	9,25365.5	9,25769.8	9,26171.7	9,26571.4	9,26968.8	9,27364.0	9,27757.1	9,28147.9	9,28536.6	9,28923.1
27	9,25372.3	9,25776.5	9,26178.4	9,26578.0	9,26975.4	9,27370.6	9,27763.6	9,28154.4	9,28543.0	9,28929.5
28	9,25379.0	9,25783.2	9,26185.1	9,26584.7	9,26982.0	9,27377.2	9,27770.1	9,28160.9	9,28549.5	9,28935.9
29	9,25385.8	9,25789.9	9,26191.7	9,26591.3	9,26988.6	9,27383.7	9,27776.7	9,28167.4	9,28555.9	9,28942.4
30	9,25392.6	9,25796.6	9,26198.4	9,26598.0	9,26995.2	9,27390.3	9,27783.2	9,28173.9	9,28562.4	9,28948.8
31	9,25399.3	9,25803.3	9,26205.1	9,26604.6	9,27001.8	9,27396.9	9,27789.7	9,28180.4	9,28568.8	9,28955.2
32	9,25406.1	9,25810.1	9,26211.8	9,26611.2	9,27008.4	9,27403.4	9,27796.2	9,28186.8	9,28575.3	9,28961.6
33	9,25412.8	9,25816.8	9,26218.5	9,26617.9	9,27015.0	9,27410.0	9,27802.8	9,28193.3	9,28581.8	9,28968.0
34	9,25419.6	9,25823.5	9,26225.1	9,26624.5	9,27021.6	9,27416.6	9,27809.3	9,28199.8	9,28588.2	9,28974.5
35	9,25426.3	9,25830.2	9,26231.8	9,26631.1	9,27028.2	9,27423.1	9,27815.8	9,28206.3	9,28594.7	9,28980.9
36	9,25433.1	9,25836.9	9,26238.5	9,26637.8	9,27034.8	9,27429.7	9,27822.3	9,28212.8	9,28601.1	9,28987.3
37	9,25439.8	9,25843.6	9,26245.2	9,26644.4	9,27041.4	9,27436.2	9,27828.9	9,28219.3	9,28607.6	9,28993.7
38	9,25446.6	9,25850.3	9,26251.8	9,26651.1	9,27048.0	9,27442.8	9,27835.4	9,28225.8	9,28614.0	9,29000.1
39	9,25453.3	9,25857.0	9,26258.5	9,26657.7	9,27054.6	9,27449.4	9,27841.9	9,28232.3	9,28620.5	9,29006.6
40	9,25460.1	9,25863.7	9,26265.2	9,26664.3	9,27061.2	9,27455.9	9,27848.4	9,28238.8	9,28626.9	9,29013.0
41	9,25466.8	9,25870.5	9,26271.8	9,26671.0	9,27067.8	9,27462.5	9,27855.0	9,28245.3	9,28633.4	9,29019.4
42	9,25473.6	9,25877.2	9,26278.5	9,26677.6	9,27074.4	9,27469.1	9,27861.5	9,28251.7	9,28639.8	9,29025.8
43	9,25480.3	9,25883.9	9,26285.2	9,26684.2	9,27081.0	9,27475.6	9,27868.0	9,28258.2	9,28646.3	9,29032.2
44	9,25487.0	9,25890.6	9,26291.8	9,26690.8	9,27087.6	9,27482.2	9,27874.5	9,28264.7	9,28652.7	9,29038.6
45	9,25493.8	9,25897.3	9,26298.5	9,26697.5	9,27094.2	9,27488.7	9,27881.0	9,28271.2	9,28659.2	9,29045.0
46	9,25500.5	9,25904.0	9,26305.2	9,26704.1	9,27100.8	9,27495.3	9,27887.6	9,28277.7	9,28665.6	9,29051.5
47	9,25507.3	9,25910.7	9,26311.9	9,26710.7	9,27107.4	9,27501.9	9,27894.1	9,28284.2	9,28672.1	9,29057.9
48	9,25514.0	9,25917.4	9,26318.5	9,26717.4	9,27114.0	9,27508.4	9,27900.6	9,28290.6	9,28678.5	9,29064.3
49	9,25520.8	9,25924.1	9,26325.2	9,26724.0	9,27120.6	9,27515.0	9,27907.1	9,28297.1	9,28685.0	9,29070.7
50	9,25527.5	9,25930.8	9,26331.8	9,26730.6	9,27127.2	9,27521.5	9,27913.6	9,28303.6	9,28691.4	9,29077.1
51	9,25534.2	9,25937.5	9,26338.5	9,26737.3	9,27133.8	9,27528.1	9,27920.2	9,28310.1	9,28697.9	9,29083.5
52	9,25541.0	9,25944.2	9,26345.2	9,26743.9	9,27140.4	9,27534.6	9,27926.7	9,28316.6	9,28704.3	9,29089.9
53	9,25547.7	9,25950.9	9,26351.8	9,26750.5	9,27147.0	9,27541.2	9,27933.2	9,28323.0	9,28710.8	9,29096.3
54	9,25554.5	9,25957.6	9,26358.5	9,26757.1	9,27153.5	9,27547.7	9,27939.7	9,28329.5	9,28717.2	9,29102.7
55	9,25561.2	9,25964.3	9,26365.2	9,26763.8	9,27160.1	9,27554.3	9,27946.2	9,28336.0	9,28723.6	9,29109.1
56	9,25567.9	9,25971.0	9,26371.8	9,26770.4	9,27166.7	9,27560.8	9,27952.7	9,28342.5	9,28730.1	9,29115.5
57	9,25574.7	9,25977.7	9,26378.5	9,26777.0	9,27173.3	9,27567.4	9,27959.3	9,28349.0	9,28736.5	9,29122.0
58	9,25581.4	9,25984.4	9,26385.1	9,26783.6	9,27179.9	9,27573.9	9,27965.8	9,28355.4	9,28743.0	9,29128.4
59	9,25588.1	9,25991.1	9,26391.8	9,26790.3	9,27186.5	9,27580.5	9,27972.3	9,28361.9	9,28749.4	9,29134.8
60	9,25594.9	9,25997.8	9,26398.5	9,26796.9	9,27193.0	9,27587.0	9,27978.8	9,28368.4	9,28755.8	9,29141.2

Log. Sin². 1. 3⁴.

"	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'
	6.4	6.4	6.3	6.3	6.2	6.2	6.2	6.1	6.1	6.1
0	9,29141.2	9,29524.4	9,29905.5	9,30284.5	9,30661.5	9,31036.4	9,31409.4	9,31780.3	9,32149.2	9,32516.1
1	9,29147.6	9,29530.8	9,29911.8	9,30290.8	9,30667.7	9,31042.7	9,31415.6	9,31786.4	9,32155.3	9,32522.2
2	9,29154.0	9,29537.1	9,29918.2	9,30297.1	9,30674.0	9,31048.9	9,31421.8	9,31792.6	9,32161.5	9,32528.3
3	9,29160.4	9,29543.5	9,29924.5	9,30303.4	9,30680.3	9,31055.1	9,31428.0	9,31798.8	9,32167.6	9,32534.4
4	9,29166.8	9,29549.8	9,29930.8	9,30309.7	9,30686.6	9,31061.4	9,31434.1	9,31804.9	9,32173.7	9,32540.5
5	9,29173.2	9,29556.2	9,29937.2	9,30316.0	9,30692.8	9,31067.6	9,31440.3	9,31811.1	9,32179.8	9,32546.6
6	9,29179.6	9,29562.6	9,29943.5	9,30322.3	9,30699.1	9,31073.8	9,31446.5	9,31817.3	9,32186.0	9,32552.7
7	9,29186.0	9,29569.0	9,29949.8	9,30328.6	9,30705.4	9,31080.1	9,31452.7	9,31823.4	9,32192.1	9,32558.8
8	9,29192.4	9,29575.3	9,29956.1	9,30334.9	9,30711.6	9,31086.3	9,31458.9	9,31829.6	9,32198.2	9,32564.9
9	9,29198.8	9,29581.7	9,29962.5	9,30341.2	9,30717.9	9,31092.5	9,31465.1	9,31835.7	9,32204.4	9,32571.0
10	9,29205.2	9,29588.0	9,29968.8	9,30347.5	9,30724.1	9,31098.7	9,31471.3	9,31841.9	9,32210.5	9,32577.1
11	9,29211.6	9,29594.4	9,29975.1	9,30353.8	9,30730.4	9,31105.0	9,31477.5	9,31848.1	9,32216.6	9,32583.2
12	9,29218.0	9,29600.8	9,29981.5	9,30360.1	9,30736.7	9,31111.2	9,31483.7	9,31854.2	9,32222.7	9,32589.3
13	9,29224.4	9,29607.1	9,29987.8	9,30366.4	9,30742.9	9,31117.4	9,31489.9	9,31860.4	9,32228.9	9,32595.4
14	9,29230.8	9,29613.5	9,29994.1	9,30372.7	9,30749.2	9,31123.6	9,31496.1	9,31866.5	9,32235.0	9,32601.5
15	9,29237.2	9,29619.8	9,30000.4	9,30379.0	9,30755.4	9,31129.9	9,31502.3	9,31872.7	9,32241.1	9,32607.6
16	9,29243.6	9,29626.2	9,30006.8	9,30385.3	9,30761.7	9,31136.1	9,31508.5	9,31878.8	9,32247.2	9,32613.6
17	9,29250.0	9,29632.6	9,30013.1	9,30391.6	9,30767.9	9,31142.3	9,31514.7	9,31885.0	9,32253.4	9,32619.7
18	9,29256.4	9,29638.9	9,30019.4	9,30397.8	9,30774.2	9,31148.5	9,31520.8	9,31891.1	9,32259.5	9,32625.8
19	9,29262.8	9,29645.3	9,30025.7	9,30404.1	9,30780.5	9,31154.8	9,31527.0	9,31897.3	9,32265.6	9,32631.9
20	9,29269.1	9,29651.6	9,30032.1	9,30410.4	9,30786.7	9,31161.0	9,31533.2	9,31903.5	9,32271.7	9,32638.0
21	9,29275.5	9,29658.0	9,30038.4	9,30416.7	9,30793.0	9,31167.2	9,31539.4	9,31909.6	9,32277.8	9,32644.1
22	9,29281.9	9,29664.4	9,30044.7	9,30423.0	9,30799.2	9,31173.4	9,31545.6	9,31915.8	9,32284.0	9,32650.2
23	9,29288.3	9,29670.7	9,30051.0	9,30429.3	9,30805.5	9,31179.6	9,31551.8	9,31921.9	9,32290.1	9,32656.3
24	9,29294.7	9,29677.1	9,30057.4	9,30435.6	9,30811.7	9,31185.8	9,31558.0	9,31928.1	9,32296.2	9,32662.4
25	9,29301.1	9,29683.4	9,30063.7	9,30441.9	9,30818.0	9,31192.1	9,31564.1	9,31934.2	9,32302.3	9,32668.5
26	9,29307.5	9,29689.8	9,30070.0	9,30448.1	9,30824.2	9,31198.3	9,31570.3	9,31940.4	9,32308.4	9,32674.5
27	9,29313.9	9,29696.1	9,30076.3	9,30454.4	9,30830.5	9,31204.5	9,31576.5	9,31946.5	9,32314.6	9,32680.6
28	9,29320.3	9,29702.5	9,30082.6	9,30460.7	9,30836.7	9,31210.7	9,31582.7	9,31952.7	9,32320.7	9,32686.7
29	9,29326.7	9,29708.8	9,30089.0	9,30467.0	9,30843.0	9,31216.9	9,31588.9	9,31958.8	9,32326.8	9,32692.8
30	9,29333.0	9,29715.2	9,30095.3	9,30473.3	9,30849.2	9,31223.2	9,31595.1	9,31965.0	9,32332.9	9,32698.9
31	9,29339.4	9,29721.6	9,30101.6	9,30479.6	9,30855.5	9,31229.4	9,31601.2	9,31971.1	9,32339.0	9,32705.0
32	9,29345.8	9,29727.9	9,30107.9	9,30485.8	9,30861.7	9,31235.6	9,31607.4	9,31977.3	9,32345.1	9,32711.0
33	9,29352.2	9,29734.3	9,30114.2	9,30492.1	9,30868.0	9,31241.8	9,31613.6	9,31983.4	9,32351.3	9,32717.1
34	9,29358.6	9,29740.6	9,30120.5	9,30498.4	9,30874.2	9,31248.0	9,31619.8	9,31989.6	9,32357.4	9,32723.2
35	9,29365.0	9,29747.0	9,30126.8	9,30504.7	9,30880.5	9,31254.2	9,31626.0	9,31995.7	9,32363.5	9,32729.3
36	9,29371.3	9,29753.3	9,30133.2	9,30511.0	9,30886.7	9,31260.4	9,31632.1	9,32001.9	9,32369.6	9,32735.4
37	9,29377.7	9,29759.7	9,30139.5	9,30517.2	9,30893.0	9,31266.6	9,31638.3	9,32008.0	9,32375.7	9,32741.4
38	9,29384.1	9,29766.0	9,30145.8	9,30523.5	9,30899.2	9,31272.9	9,31644.5	9,32014.1	9,32381.8	9,32747.5
39	9,29390.5	9,29772.3	9,30152.1	9,30529.8	9,30905.4	9,31279.1	9,31650.7	9,32020.3	9,32387.9	9,32753.6
40	9,29396.9	9,29778.7	9,30158.4	9,30536.1	9,30911.7	9,31285.3	9,31656.8	9,32026.4	9,32394.0	9,32759.7
41	9,29403.3	9,29785.0	9,30164.7	9,30542.4	9,30917.9	9,31291.5	9,31663.0	9,32032.6	9,32400.2	9,32765.8
42	9,29409.6	9,29791.4	9,30171.0	9,30548.6	9,30924.2	9,31297.7	9,31669.2	9,32038.7	9,32406.3	9,32771.8
43	9,29416.0	9,29797.7	9,30177.3	9,30554.9	9,30930.4	9,31303.9	9,31675.4	9,32044.9	9,32412.4	9,32777.9
44	9,29422.4	9,29804.1	9,30183.6	9,30561.2	9,30936.7	9,31310.1	9,31681.5	9,32051.0	9,32418.5	9,32784.0
45	9,29428.8	9,29810.4	9,30190.0	9,30567.5	9,30942.9	9,31316.3	9,31687.7	9,32057.1	9,32424.6	9,32790.1
46	9,29435.2	9,29816.8	9,30196.3	9,30573.7	9,30949.1	9,31322.5	9,31693.9	9,32063.3	9,32430.7	9,32796.1
47	9,29441.5	9,29823.1	9,30202.6	9,30580.0	9,30955.4	9,31328.7	9,31700.1	9,32069.4	9,32436.8	9,32802.2
48	9,29447.9	9,29829.4	9,30208.9	9,30586.3	9,30961.6	9,31334.9	9,31706.2	9,32075.6	9,32442.9	9,32808.3
49	9,29454.3	9,29835.8	9,30215.2	9,30592.5	9,30967.9	9,31341.1	9,31712.4	9,32081.7	9,32449.0	9,32814.4
50	9,29460.7	9,29842.1	9,30221.5	9,30598.8	9,30974.1	9,31347.3	9,31718.6	9,32087.8	9,32455.1	9,32820.4
51	9,29467.0	9,29848.5	9,30227.8	9,30605.1	9,30980.3	9,31353.5	9,31724.8	9,32094.0	9,32461.2	9,32826.5
52	9,29473.4	9,29854.8	9,30234.1	9,30611.4	9,30986.6	9,31359.7	9,31730.9	9,32100.1	9,32467.3	9,32832.6
53	9,29479.8	9,29861.2	9,30240.4	9,30617.6	9,30992.8	9,31366.0	9,31737.1	9,32106.2	9,32473.4	9,32838.6
54	9,29486.2	9,29867.5	9,30246.7	9,30623.9	9,30999.0	9,31372.2	9,31743.3	9,32112.4	9,32479.5	9,32844.7
55	9,29492.5	9,29873.8	9,30253.0	9,30630.2	9,31005.3	9,31378.4	9,31749.4	9,32118.5	9,32485.6	9,32850.8
56	9,29498.8	9,29880.1	9,30259.3	9,30636.4	9,31011.5	9,31384.6	9,31755.6	9,32124.6	9,32491.7	9,32856.8
57	9,29505.2	9,29886.5	9,30265.6	9,30642.7	9,31017.7	9,31390.8	9,31761.8	9,32130.8	9,32497.8	9,32862.9
58	9,29511.6	9,29892.8	9,30271.9	9,30649.0	9,31024.0	9,31397.0	9,31767.9	9,32136.9	9,32503.9	9,32869.0
59	9,29518.0	9,29899.2	9,30278.2	9,30655.2	9,31030.2	9,31403.2	9,31774.1	9,32143.1	9,32510.0	9,32875.1
60	9,29524.4	9,29905.5	9,30284.5	9,30661.5	9,31036.4	9,31409.4	9,31780.3	9,32149.2	9,32516.1	9,32881.1

n	40'	41'	42'	43'	44'	45'	46'	47'	48'	49'
	6.1	6.0	6.0	6.0	5.9	5.9	5.9	5.8	5.8	5.8
0	9,32881.1	9,33214.2	9,33605.3	9,33964.5	9,34321.9	9,34677.3	9,35030.9	9,35382.7	9,35732.6	9,36080.7
1	9,32887.2	9,33250.2	9,33611.3	9,33970.5	9,34327.8	9,34683.2	9,35036.8	9,35388.5	9,35738.4	9,36086.5
2	9,32893.3	9,33256.2	9,33617.3	9,33976.5	9,34333.7	9,34689.1	9,35042.7	9,35394.4	9,35744.2	9,36092.3
3	9,32899.3	9,33262.3	9,33623.3	9,33982.4	9,34339.7	9,34695.0	9,35048.5	9,35400.2	9,35750.0	9,36098.0
4	9,32905.4	9,33268.3	9,33629.3	9,33988.4	9,34345.6	9,34700.9	9,35054.4	9,35406.0	9,35755.8	9,36103.8
5	9,32911.5	9,33274.3	9,33635.3	9,33994.4	9,34351.6	9,34706.9	9,35060.3	9,35411.9	9,35761.7	9,36109.6
6	9,32917.5	9,33280.4	9,33641.3	9,34000.3	9,34357.5	9,34712.8	9,35066.2	9,35417.7	9,35767.5	9,36115.4
7	9,32923.6	9,33286.4	9,33647.3	9,34006.3	9,34363.4	9,34718.7	9,35072.1	9,35423.6	9,35773.3	9,36121.2
8	9,32929.6	9,33292.4	9,33653.3	9,34012.3	9,34369.4	9,34724.6	9,35077.9	9,35429.4	9,35779.1	9,36127.0
9	9,32935.7	9,33298.5	9,33659.3	9,34018.3	9,34375.3	9,34730.5	9,35083.8	9,35435.3	9,35784.9	9,36132.8
10	9,32941.8	9,33304.5	9,33665.3	9,34024.2	9,34381.2	9,34736.4	9,35089.7	9,35441.1	9,35790.7	9,36138.5
11	9,32947.8	9,33310.5	9,33671.3	9,34030.2	9,34387.2	9,34742.3	9,35095.5	9,35447.0	9,35796.5	9,36144.3
12	9,32953.9	9,33316.6	9,33677.3	9,34036.1	9,34393.1	9,34748.2	9,35101.4	9,35452.8	9,35802.3	9,36150.1
13	9,32959.9	9,33322.6	9,33683.3	9,34042.1	9,34399.0	9,34754.1	9,35107.3	9,35458.6	9,35808.2	9,36155.9
14	9,32966.0	9,33328.6	9,33689.3	9,34048.1	9,34405.0	9,34760.0	9,35113.2	9,35464.5	9,35814.0	9,36161.7
15	9,32972.1	9,33334.6	9,33695.3	9,34054.0	9,34410.9	9,34765.9	9,35119.0	9,35470.3	9,35819.8	9,36167.4
16	9,32978.1	9,33340.7	9,33701.3	9,34060.0	9,34416.8	9,34771.8	9,35124.9	9,35476.2	9,35825.6	9,36173.2
17	9,32984.2	9,33346.7	9,33707.3	9,34066.0	9,34422.8	9,34777.7	9,35130.8	9,35482.0	9,35831.4	9,36179.0
18	9,32990.2	9,33352.7	9,33713.3	9,34071.9	9,34428.7	9,34783.6	9,35136.6	9,35487.8	9,35837.2	9,36184.8
19	9,32996.3	9,33358.7	9,33719.3	9,34077.9	9,34434.7	9,34789.5	9,35142.5	9,35493.7	9,35843.0	9,36190.6
20	9,33002.4	9,33364.8	9,33725.3	9,34083.8	9,34440.6	9,34795.4	9,35148.4	9,35499.5	9,35848.8	9,36196.3
21	9,33008.4	9,33370.8	9,33731.3	9,34089.8	9,34446.5	9,34801.3	9,35154.2	9,35505.3	9,35854.6	9,36202.1
22	9,33014.5	9,33376.8	9,33737.2	9,34095.8	9,34452.4	9,34807.2	9,35160.1	9,35511.2	9,35860.4	9,36207.9
23	9,33020.5	9,33382.8	9,33743.2	9,34101.7	9,34458.3	9,34813.1	9,35166.0	9,35517.0	9,35866.2	9,36213.7
24	9,33026.6	9,33388.9	9,33749.2	9,34107.7	9,34464.3	9,34819.0	9,35171.8	9,35522.8	9,35872.0	9,36219.4
25	9,33032.6	9,33394.9	9,33755.2	9,34113.6	9,34470.2	9,34824.9	9,35177.7	9,35528.7	9,35877.9	9,36225.2
26	9,33038.7	9,33400.9	9,33761.2	9,34119.6	9,34476.1	9,34830.8	9,35183.6	9,35534.5	9,35883.7	9,36231.0
27	9,33044.7	9,33406.9	9,33767.2	9,34125.6	9,34482.1	9,34836.7	9,35189.4	9,35540.4	9,35889.5	9,36236.8
28	9,33050.8	9,33412.9	9,33773.2	9,34131.5	9,34488.0	9,34842.6	9,35195.3	9,35546.3	9,35895.3	9,36242.5
29	9,33056.8	9,33419.0	9,33779.2	9,34137.5	9,34493.9	9,34848.5	9,35201.2	9,35552.1	9,35901.1	9,36248.3
30	9,33062.9	9,33425.0	9,33785.2	9,34143.4	9,34499.8	9,34854.4	9,35207.0	9,35557.9	9,35906.9	9,36254.1
31	9,33068.9	9,33431.0	9,33791.1	9,34149.4	9,34505.7	9,34860.2	9,35212.9	9,35563.7	9,35912.7	9,36259.8
32	9,33075.0	9,33437.0	9,33797.1	9,34155.3	9,34511.7	9,34866.1	9,35218.7	9,35569.5	9,35918.5	9,36265.6
33	9,33081.0	9,33443.0	9,33803.1	9,34161.3	9,34517.6	9,34872.0	9,35224.6	9,35575.4	9,35924.3	9,36271.4
34	9,33087.1	9,33449.1	9,33809.1	9,34167.3	9,34523.5	9,34877.9	9,35230.5	9,35581.2	9,35930.1	9,36277.1
35	9,33093.1	9,33455.1	9,33815.1	9,34173.2	9,34529.4	9,34883.8	9,35236.3	9,35587.0	9,35935.9	9,36282.9
36	9,33099.2	9,33461.1	9,33821.1	9,34179.2	9,34535.4	9,34889.7	9,35242.2	9,35592.8	9,35941.7	9,36288.7
37	9,33105.2	9,33467.1	9,33827.1	9,34185.1	9,34541.3	9,34895.6	9,35248.0	9,35598.7	9,35947.5	9,36294.5
38	9,33111.3	9,33473.1	9,33833.0	9,34191.1	9,34547.2	9,34901.5	9,35253.9	9,35604.5	9,35953.3	9,36300.2
39	9,33117.3	9,33479.1	9,33839.0	9,34197.0	9,34553.1	9,34907.4	9,35259.8	9,35610.3	9,35959.1	9,36306.0
40	9,33123.4	9,33485.1	9,33845.0	9,34203.0	9,34559.0	9,34913.3	9,35265.6	9,35616.1	9,35964.9	9,36311.8
41	9,33129.4	9,33491.2	9,33851.0	9,34208.9	9,34565.0	9,34919.2	9,35271.5	9,35622.0	9,35970.7	9,36317.5
42	9,33135.5	9,33497.2	9,33857.0	9,34214.9	9,34570.9	9,34925.0	9,35277.3	9,35627.8	9,35976.4	9,36323.3
43	9,33141.5	9,33503.2	9,33862.9	9,34220.8	9,34576.8	9,34930.9	9,35283.2	9,35633.6	9,35982.2	9,36329.1
44	9,33147.5	9,33509.2	9,33868.9	9,34226.8	9,34582.7	9,34936.8	9,35289.0	9,35639.4	9,35988.0	9,36334.8
45	9,33153.6	9,33515.2	9,33874.9	9,34232.7	9,34588.6	9,34942.7	9,35294.9	9,35645.3	9,35993.8	9,36340.6
46	9,33159.6	9,33521.2	9,33880.9	9,34238.7	9,34594.5	9,34948.6	9,35300.8	9,35651.1	9,35999.6	9,36346.3
47	9,33165.7	9,33527.2	9,33886.9	9,34244.6	9,34600.5	9,34954.5	9,35306.6	9,35656.9	9,36005.4	9,36352.1
48	9,33171.7	9,33533.2	9,33892.8	9,34250.5	9,34606.4	9,34960.3	9,35312.5	9,35662.7	9,36011.2	9,36357.9
49	9,33177.8	9,33539.3	9,33898.8	9,34256.5	9,34612.3	9,34966.2	9,35318.3	9,35668.6	9,36017.0	9,36363.6
50	9,33183.8	9,33545.3	9,33904.8	9,34262.4	9,34618.2	9,34972.1	9,35324.2	9,35674.4	9,36022.8	9,36369.4
51	9,33189.8	9,33551.3	9,33910.8	9,34268.4	9,34624.1	9,34978.0	9,35330.0	9,35680.2	9,36028.6	9,36375.2
52	9,33195.9	9,33557.3	9,33916.7	9,34274.3	9,34630.0	9,34983.9	9,35335.9	9,35686.0	9,36034.4	9,36380.9
53	9,33201.9	9,33563.3	9,33922.7	9,34280.3	9,34635.9	9,34989.8	9,35341.7	9,35691.9	9,36040.2	9,36386.6
54	9,33208.0	9,33569.3	9,33928.7	9,34286.2	9,34641.9	9,34995.6	9,35347.6	9,35697.7	9,36046.0	9,36392.4
55	9,33214.0	9,33575.3	9,33934.7	9,34292.2	9,34647.8	9,35001.5	9,35353.4	9,35703.5	9,36051.8	9,36398.2
56	9,33220.0	9,33581.3	9,33940.6	9,34298.1	9,34653.7	9,35007.4	9,35359.3	9,35709.3	9,36057.5	9,36404.0
57	9,33226.1	9,33587.3	9,33946.6	9,34304.0	9,34659.6	9,35013.3	9,35365.1	9,35715.1	9,36063.3	9,36409.7
58	9,33232.1	9,33593.3	9,33952.6	9,34310.0	9,34665.5	9,35019.2	9,35371.0	9,35720.9	9,36069.1	9,36415.5
59	9,33238.1	9,33599.3	9,33958.6	9,34315.9	9,34671.4	9,35025.0	9,35376.8	9,35726.8	9,36074.9	9,36421.2
60	9,33244.2	9,33605.3	9,33964.5	9,34321.9	9,34677.3	9,35030.9	9,35382.7	9,35732.6	9,36080.7	9,36427.0

n	50'	51'	52'	53'	54'	55'	56'	57'	58'	59'
	5.7	5.7	5.7	5.7	5.6	5.6	5.6	5.5	5.5	5.5
0	9,36427.0	9,36771.5	9,37114.2	9,37455.2	9,37794.5	9,38132.0	9,38467.8	9,38801.8	9,39134.2	9,39465.0
1	9,36432.7	9,36777.2	9,37119.9	9,37460.9	9,37800.1	9,38137.6	9,38473.3	9,38807.4	9,39139.8	9,39470.5
2	9,36438.5	9,36783.0	9,37125.6	9,37466.6	9,37805.7	9,38143.2	9,38478.9	9,38813.0	9,39145.3	9,39476.0
3	9,36444.3	9,36788.7	9,37131.3	9,37472.2	9,37811.4	9,38148.8	9,38484.5	9,38818.5	9,39150.8	9,39481.5
4	9,36450.0	9,36794.4	9,37137.0	9,37477.9	9,37817.0	9,38154.4	9,38490.1	9,38824.1	9,39156.3	9,39486.9
5	9,36455.8	9,36800.1	9,37142.7	9,37483.6	9,37822.7	9,38160.0	9,38495.7	9,38829.6	9,39161.9	9,39492.4
6	9,36461.5	9,36805.9	9,37148.4	9,37489.2	9,37828.3	9,38165.6	9,38501.2	9,38835.2	9,39167.4	9,39497.9
7	9,36467.3	9,36811.6	9,37154.1	9,37494.9	9,37833.9	9,38171.2	9,38506.8	9,38840.7	9,39172.9	9,39503.4
8	9,36473.0	9,36817.3	9,37159.8	9,37500.6	9,37839.6	9,38176.8	9,38512.4	9,38846.3	9,39178.4	9,39508.9
9	9,36478.8	9,36823.0	9,37165.5	9,37506.2	9,37845.2	9,38182.5	9,38518.0	9,38851.8	9,39184.0	9,39514.4
10	9,36484.5	9,36828.8	9,37171.2	9,37511.9	9,37850.8	9,38188.1	9,38523.6	9,38857.4	9,39189.5	9,39519.9
11	9,36490.3	9,36834.5	9,37176.9	9,37517.6	9,37856.5	9,38193.7	9,38529.1	9,38862.9	9,39195.0	9,39525.4
12	9,36496.0	9,36840.2	9,37182.6	9,37523.2	9,37862.1	9,38199.3	9,38534.7	9,38868.5	9,39200.5	9,39530.9
13	9,36501.8	9,36845.9	9,37188.3	9,37528.9	9,37867.7	9,38204.9	9,38540.3	9,38874.0	9,39206.0	9,39536.3
14	9,36507.5	9,36851.6	9,37194.0	9,37534.5	9,37873.4	9,38210.5	9,38545.9	9,38879.6	9,39211.6	9,39541.9
15	9,36513.3	9,36857.4	9,37199.7	9,37540.2	9,37879.0	9,38216.1	9,38551.5	9,38885.1	9,39217.1	9,39547.4
16	9,36519.0	9,36863.1	9,37205.3	9,37545.9	9,37884.6	9,38221.7	9,38557.0	9,38890.7	9,39222.6	9,39552.9
17	9,36524.8	9,36868.8	9,37211.0	9,37551.5	9,37890.3	9,38227.3	9,38562.6	9,38896.2	9,39228.1	9,39558.4
18	9,36530.5	9,36874.5	9,37216.7	9,37557.2	9,37895.9	9,38232.9	9,38568.2	9,38901.7	9,39233.6	9,39563.8
19	9,36536.3	9,36880.2	9,37222.4	9,37562.9	9,37901.5	9,38238.5	9,38573.8	9,38907.3	9,39239.2	9,39569.3
20	9,36542.0	9,36885.9	9,37228.1	9,37568.5	9,37907.2	9,38244.1	9,38579.3	9,38912.8	9,39244.7	9,39574.8
21	9,36547.8	9,36891.6	9,37233.8	9,37574.2	9,37912.8	9,38249.7	9,38584.9	9,38918.4	9,39250.2	9,39580.3
22	9,36553.5	9,36897.4	9,37239.5	9,37579.8	9,37918.4	9,38255.3	9,38590.5	9,38923.9	9,39255.7	9,39585.8
23	9,36559.3	9,36903.1	9,37245.2	9,37585.5	9,37924.1	9,38260.9	9,38596.0	9,38929.5	9,39261.2	9,39591.3
24	9,36565.0	9,36908.8	9,37250.8	9,37591.1	9,37929.7	9,38266.5	9,38601.6	9,38935.0	9,39266.7	9,39596.8
25	9,36570.8	9,36914.5	9,37256.5	9,37596.8	9,37935.3	9,38272.1	9,38607.2	9,38940.6	9,39272.2	9,39602.3
26	9,36576.5	9,36920.3	9,37262.2	9,37602.5	9,37940.9	9,38277.7	9,38612.7	9,38946.1	9,39277.8	9,39607.7
27	9,36582.2	9,36926.0	9,37267.9	9,37608.1	9,37946.6	9,38283.3	9,38618.3	9,38951.6	9,39283.3	9,39613.2
28	9,36588.0	9,36931.7	9,37273.6	9,37613.8	9,37952.2	9,38288.9	9,38623.9	9,38957.2	9,39288.8	9,39618.7
29	9,36593.7	9,36937.4	9,37279.3	9,37619.4	9,37957.8	9,38294.5	9,38629.5	9,38962.7	9,39294.3	9,39624.2
30	9,36599.5	9,36943.1	9,37285.0	9,37625.1	9,37963.4	9,38300.1	9,38635.0	9,38968.3	9,39299.8	9,39629.7
31	9,36605.2	9,36948.8	9,37290.6	9,37630.7	9,37969.1	9,38305.7	9,38640.6	9,38973.8	9,39305.3	9,39635.2
32	9,36611.0	9,36954.5	9,37296.3	9,37636.4	9,37974.7	9,38311.3	9,38646.2	9,38979.3	9,39310.8	9,39640.7
33	9,36616.7	9,36960.2	9,37302.0	9,37642.0	9,37980.3	9,38316.9	9,38651.7	9,38984.9	9,39316.3	9,39646.1
34	9,36622.4	9,36965.9	9,37307.7	9,37647.7	9,37985.9	9,38322.5	9,38657.3	9,38990.4	9,39321.9	9,39651.6
35	9,36628.2	9,36971.6	9,37313.4	9,37653.3	9,37991.6	9,38328.1	9,38662.9	9,38996.0	9,39327.4	9,39657.1
36	9,36633.9	9,36977.4	9,37319.0	9,37659.0	9,37997.2	9,38333.7	9,38668.4	9,39001.5	9,39332.9	9,39662.6
37	9,36639.7	9,36983.1	9,37324.7	9,37664.6	9,38002.8	9,38339.3	9,38674.0	9,39007.0	9,39338.4	9,39668.1
38	9,36645.4	9,36988.8	9,37330.4	9,37670.3	9,38008.4	9,38344.8	9,38679.6	9,39012.6	9,39343.9	9,39673.5
39	9,36651.1	9,36994.5	9,37336.1	9,37675.9	9,38014.1	9,38350.4	9,38685.1	9,39018.1	9,39349.4	9,39679.0
40	9,36656.9	9,37000.2	9,37341.8	9,37681.6	9,38019.7	9,38356.0	9,38690.7	9,39023.6	9,39354.9	9,39684.5
41	9,36662.6	9,37005.9	9,37347.4	9,37687.2	9,38025.3	9,38361.6	9,38696.2	9,39029.2	9,39360.4	9,39690.0
42	9,36668.3	9,37011.6	9,37353.1	9,37692.9	9,38030.9	9,38367.2	9,38701.8	9,39034.7	9,39365.9	9,39695.5
43	9,36674.1	9,37017.3	9,37358.8	9,37698.5	9,38036.5	9,38372.8	9,38707.4	9,39040.2	9,39371.4	9,39700.9
44	9,36679.8	9,37023.0	9,37364.5	9,37704.2	9,38042.1	9,38378.4	9,38712.9	9,39045.8	9,39376.9	9,39706.4
45	9,36685.5	9,37028.7	9,37370.2	9,37709.8	9,38047.8	9,38384.0	9,38718.5	9,39051.3	9,39382.4	9,39711.9
46	9,36691.3	9,37034.4	9,37375.8	9,37715.5	9,38053.4	9,38389.6	9,38724.1	9,39056.8	9,39387.9	9,39717.4
47	9,36697.0	9,37040.1	9,37381.5	9,37721.1	9,38059.0	9,38395.2	9,38729.6	9,39062.4	9,39393.4	9,39722.9
48	9,36702.7	9,37045.8	9,37387.2	9,37726.8	9,38064.6	9,38400.7	9,38735.2	9,39067.9	9,39398.9	9,39728.3
49	9,36708.5	9,37051.5	9,37392.9	9,37732.4	9,38070.2	9,38406.3	9,38740.7	9,39073.4	9,39404.5	9,39733.8
50	9,36714.2	9,37057.2	9,37398.5	9,37738.1	9,38075.8	9,38411.9	9,38746.3	9,39079.0	9,39410.0	9,39739.3
51	9,36719.9	9,37062.9	9,37404.2	9,37743.7	9,38081.5	9,38417.5	9,38751.9	9,39084.5	9,39415.5	9,39744.8
52	9,36725.7	9,37068.6	9,37409.9	9,37749.3	9,38087.1	9,38423.1	9,38757.4	9,39090.0	9,39421.0	9,39750.2
53	9,36731.4	9,37074.4	9,37415.5	9,37755.0	9,38092.7	9,38428.7	9,38763.0	9,39095.6	9,39426.5	9,39755.7
54	9,36737.1	9,37080.1	9,37421.2	9,37760.6	9,38098.3	9,38434.3	9,38768.5	9,39101.1	9,39432.0	9,39761.2
55	9,36742.9	9,37085.8	9,37426.9	9,37766.3	9,38103.9	9,38439.9	9,38774.1	9,39106.6	9,39437.5	9,39766.7
56	9,36748.6	9,37091.5	9,37432.6	9,37771.9	9,38109.5	9,38445.4	9,38779.6	9,39112.1	9,39443.0	9,39772.1
57	9,36754.3	9,37097.2	9,37438.2	9,37777.5	9,38115.1	9,38451.0	9,38785.2	9,39117.7	9,39448.5	9,39777.6
58	9,36760.0	9,37102.9	9,37443.9	9,37783.2	9,38120.8	9,38456.6	9,38790.7	9,39123.2	9,39454.0	9,39783.1
59	9,36765.8	9,37108.6	9,37449.6	9,37788.8	9,38126.4	9,38462.2	9,38796.3	9,39128.7	9,39459.5	9,39788.5
60	9,36771.5	9,37114.2	9,37455.2	9,37794.5	9,38132.0	9,38467.8	9,38801.8	9,39134.2	9,39465.0	9,39794.0

"	0'	1'	2'	3'	4'	5'	6'	7'	8'	9'
	5.5	5.4	5.4	5.4	5.3	5.3	5.3	5.3	5.2	5.2
0	9,39794.0	9,40121.4	9,40447.1	9,40771.3	9,41093.8	9,41414.7	9,41734.0	9,42051.7	9,42367.9	9,42682.5
1	9,39799.5	9,40126.8	9,40452.6	9,40776.7	9,41099.1	9,41420.0	9,41739.3	9,42057.0	9,42373.1	9,42687.7
2	9,39804.9	9,40132.3	9,40458.0	9,40782.1	9,41104.5	9,41425.3	9,41744.6	9,42062.3	9,42378.4	9,42692.9
3	9,39810.4	9,40137.7	9,40463.4	9,40787.4	9,41109.9	9,41430.7	9,41749.9	9,42067.6	9,42383.6	9,42698.1
4	9,39815.9	9,40143.2	9,40468.8	9,40792.8	9,41115.2	9,41436.0	9,41755.2	9,42072.8	9,42388.9	9,42703.4
5	9,39821.3	9,40148.6	9,40474.2	9,40798.2	9,41120.6	9,41441.4	9,41760.5	9,42078.1	9,42394.2	9,42708.6
6	9,39826.8	9,40154.0	9,40479.6	9,40803.6	9,41125.9	9,41446.7	9,41765.8	9,42083.3	9,42399.5	9,42713.8
7	9,39832.3	9,40159.5	9,40485.0	9,40809.0	9,41131.3	9,41452.0	9,41771.1	9,42088.6	9,42404.7	9,42719.1
8	9,39837.7	9,40164.9	9,40490.5	9,40814.4	9,41136.7	9,41457.3	9,41776.4	9,42093.9	9,42409.9	9,42724.3
9	9,39843.2	9,40170.4	9,40495.9	9,40819.7	9,41142.0	9,41462.6	9,41781.7	9,42099.2	9,42415.2	9,42729.6
10	9,39848.7	9,40175.8	9,40501.3	9,40825.1	9,41147.4	9,41467.9	9,41787.1	9,42104.5	9,42420.4	9,42734.8
11	9,39854.2	9,40181.2	9,40506.7	9,40830.5	9,41152.7	9,41473.2	9,41792.4	9,42109.8	9,42425.7	9,42740.0
12	9,39859.6	9,40186.7	9,40512.1	9,40835.9	9,41158.1	9,41478.6	9,41797.7	9,42115.1	9,42430.9	9,42745.2
13	9,39865.1	9,40192.1	9,40517.5	9,40841.3	9,41163.4	9,41484.0	9,41803.0	9,42120.3	9,42436.2	9,42750.4
14	9,39870.5	9,40197.5	9,40522.9	9,40846.7	9,41168.8	9,41489.3	9,41808.3	9,42125.6	9,42441.4	9,42755.7
15	9,39876.0	9,40203.0	9,40528.3	9,40852.0	9,41174.1	9,41494.7	9,41813.6	9,42130.9	9,42446.7	9,42760.9
16	9,39881.5	9,40208.4	9,40533.7	9,40857.4	9,41179.5	9,41500.0	9,41818.9	9,42136.2	9,42451.9	9,42766.1
17	9,39886.9	9,40213.9	9,40539.1	9,40862.8	9,41184.8	9,41505.3	9,41824.2	9,42141.5	9,42457.2	9,42771.3
18	9,39892.4	9,40219.3	9,40544.6	9,40868.2	9,41190.2	9,41510.6	9,41829.5	9,42146.7	9,42462.4	9,42776.5
19	9,39897.9	9,40224.7	9,40550.0	9,40873.6	9,41195.6	9,41516.0	9,41834.8	9,42152.0	9,42467.7	9,42781.8
20	9,39903.3	9,40230.2	9,40555.4	9,40878.9	9,41200.9	9,41521.3	9,41840.1	9,42157.3	9,42472.9	9,42787.0
21	9,39908.8	9,40235.6	9,40560.8	9,40884.3	9,41206.3	9,41526.6	9,41845.4	9,42162.5	9,42478.2	9,42792.2
22	9,39914.3	9,40241.0	9,40566.2	9,40889.7	9,41211.6	9,41531.9	9,41850.7	9,42167.8	9,42483.4	9,42797.4
23	9,39919.7	9,40246.5	9,40571.6	9,40895.1	9,41217.0	9,41537.2	9,41856.0	9,42173.1	9,42488.7	9,42802.6
24	9,39925.2	9,40251.9	9,40577.0	9,40900.5	9,41222.3	9,41542.5	9,41861.3	9,42178.4	9,42493.9	9,42807.8
25	9,39930.7	9,40257.3	9,40582.4	9,40905.8	9,41227.7	9,41547.9	9,41866.7	9,42183.6	9,42499.1	9,42813.1
26	9,39936.1	9,40262.8	9,40587.8	9,40911.2	9,41233.0	9,41553.2	9,41871.9	9,42188.9	9,42504.4	9,42818.3
27	9,39941.6	9,40268.2	9,40593.2	9,40916.6	9,41238.4	9,41558.6	9,41877.2	9,42194.2	9,42509.6	9,42823.5
28	9,39947.0	9,40273.6	9,40598.6	9,40922.0	9,41243.7	9,41563.9	9,41882.5	9,42199.4	9,42514.9	9,42828.7
29	9,39952.4	9,40279.0	9,40604.0	9,40927.4	9,41249.1	9,41569.2	9,41887.8	9,42204.7	9,42520.1	9,42834.0
30	9,39957.9	9,40284.4	9,40609.4	9,40932.7	9,41254.4	9,41574.5	9,41893.1	9,42210.0	9,42525.4	9,42839.2
31	9,39963.4	9,40289.9	9,40614.8	9,40938.1	9,41259.8	9,41579.8	9,41898.3	9,42215.2	9,42530.6	9,42844.4
32	9,39968.8	9,40295.3	9,40620.2	9,40943.5	9,41265.1	9,41585.1	9,41903.6	9,42220.5	9,42535.8	9,42849.6
33	9,39974.3	9,40300.8	9,40625.6	9,40948.9	9,41270.5	9,41590.4	9,41908.9	9,42225.7	9,42541.1	9,42854.8
34	9,39979.7	9,40306.2	9,40631.0	9,40954.2	9,41275.8	9,41595.8	9,41914.2	9,42231.0	9,42546.3	9,42860.1
35	9,39985.2	9,40311.6	9,40636.4	9,40959.6	9,41281.2	9,41601.1	9,41919.5	9,42236.3	9,42551.6	9,42865.3
36	9,39990.6	9,40317.0	9,40641.8	9,40965.0	9,41286.5	9,41606.5	9,41924.8	9,42241.6	9,42556.8	9,42870.5
37	9,39996.1	9,40322.5	9,40647.2	9,40970.3	9,41291.9	9,41611.8	9,41930.1	9,42246.9	9,42562.1	9,42875.7
38	9,40001.6	9,40327.9	9,40652.6	9,40975.7	9,41297.2	9,41617.1	9,41935.4	9,42252.1	9,42567.3	9,42880.9
39	9,40007.0	9,40333.3	9,40658.0	9,40981.1	9,41302.5	9,41622.4	9,41940.7	9,42257.4	9,42572.5	9,42886.1
40	9,40012.4	9,40338.7	9,40663.4	9,40986.5	9,41307.9	9,41627.7	9,41946.0	9,42262.7	9,42577.8	9,42891.3
41	9,40017.9	9,40344.2	9,40668.8	9,40991.8	9,41313.2	9,41633.0	9,41951.3	9,42267.9	9,42583.0	9,42896.6
42	9,40023.4	9,40349.6	9,40674.2	9,40997.2	9,41318.6	9,41638.4	9,41956.6	9,42273.2	9,42588.3	9,42901.8
43	9,40028.8	9,40355.0	9,40679.6	9,41002.6	9,41323.9	9,41643.7	9,41961.9	9,42278.5	9,42593.5	9,42907.0
44	9,40034.3	9,40360.4	9,40685.0	9,41007.9	9,41329.3	9,41649.0	9,41967.1	9,42283.7	9,42598.7	9,42912.2
45	9,40039.7	9,40365.8	9,40690.4	9,41013.3	9,41334.6	9,41654.3	9,41972.4	9,42289.0	9,42604.0	9,42917.4
46	9,40045.2	9,40371.3	9,40695.8	9,41018.7	9,41339.9	9,41659.6	9,41977.7	9,42294.2	9,42609.2	9,42922.6
47	9,40050.6	9,40376.7	9,40701.2	9,41024.0	9,41345.3	9,41664.9	9,41983.0	9,42299.5	9,42614.4	9,42927.8
48	9,40056.0	9,40382.1	9,40706.6	9,41029.4	9,41350.6	9,41670.2	9,41988.3	9,42304.8	9,42619.7	9,42933.0
49	9,40061.5	9,40387.5	9,40712.0	9,41034.8	9,41356.0	9,41675.6	9,41993.6	9,42310.0	9,42624.9	9,42938.2
50	9,40067.0	9,40393.0	9,40717.4	9,41040.1	9,41361.3	9,41680.9	9,41998.9	9,42315.3	9,42630.1	9,42943.5
51	9,40072.4	9,40398.4	9,40722.8	9,41045.5	9,41366.6	9,41686.2	9,42004.2	9,42320.5	9,42635.4	9,42948.7
52	9,40077.8	9,40403.8	9,40728.1	9,41050.9	9,41372.0	9,41691.5	9,42009.5	9,42325.8	9,42640.6	9,42953.9
53	9,40083.3	9,40409.2	9,40733.5	9,41056.2	9,41377.3	9,41696.8	9,42014.7	9,42331.1	9,42645.8	9,42959.1
54	9,40088.7	9,40414.7	9,40738.9	9,41061.6	9,41382.7	9,41702.1	9,42020.0	9,42336.3	9,42651.1	9,42964.3
55	9,40094.2	9,40420.1	9,40744.3	9,41067.0	9,41388.0	9,41707.4	9,42025.3	9,42341.6	9,42656.3	9,42969.5
56	9,40199.6	9,40425.5	9,40749.7	9,41072.3	9,41393.3	9,41712.7	9,42030.6	9,42346.8	9,42661.5	9,42974.7
57	9,40105.0	9,40430.9	9,40755.1	9,41077.7	9,41398.7	9,41718.1	9,42035.9	9,42352.1	9,42666.8	9,42979.9
58	9,40110.5	9,40436.3	9,40760.5	9,41083.1	9,41404.0	9,41723.4	9,42041.1	9,42357.4	9,42672.0	9,42985.1
59	9,40116.0	9,40441.7	9,40765.9	9,41088.4	9,41409.3	9,41728.7	9,42046.4	9,42362.6	9,42677.2	9,42990.3
60	9,40121.4	9,40447.1	9,40771.3	9,41093.8	9,41414.7	9,41734.0	9,42051.7	9,42367.9	9,42682.5	9,42995.5

n	10' 5.2	11' 5.2	12' 5.1	13' 5.1	14' 5.1	15' 5.1	16' 5.0	17' 5.0	18' 5.0	19' 5.0
0	9,42995.5	9,43307.0	9,43617.0	9,43925.5	9,44232.4	9,44537.9	9,44841.9	9,45144.5	9,45445.5	9,45745.1
1	9,43000.7	9,43312.2	9,43622.2	9,43930.6	9,44237.6	9,44543.0	9,44847.0	9,45149.5	9,45450.5	9,45750.1
2	9,43005.9	9,43317.4	9,43627.3	9,43935.8	9,44242.7	9,44548.1	9,44852.1	9,45154.5	9,45455.5	9,45755.1
3	9,43011.1	9,43322.6	9,43632.4	9,43940.9	9,44247.8	9,44553.2	9,44857.1	9,45159.6	9,45460.5	9,45760.1
4	9,43016.3	9,43327.7	9,43637.6	9,43946.0	9,44252.9	9,44558.3	9,44862.2	9,45164.6	9,45465.5	9,45765.1
5	9,43021.5	9,43332.9	9,43642.8	9,43951.1	9,44258.0	9,44563.3	9,44867.2	9,45169.6	9,45470.5	9,45770.0
6	9,43026.7	9,43338.1	9,43647.9	9,43956.3	9,44263.1	9,44568.4	9,44872.3	9,45174.6	9,45475.6	9,45775.0
7	9,43031.9	9,43343.3	9,43653.1	9,43961.4	9,44268.2	9,44573.5	9,44877.3	9,45179.7	9,45480.6	9,45780.0
8	9,43037.1	9,43348.5	9,43658.2	9,43966.5	9,44273.3	9,44578.6	9,44882.4	9,45184.7	9,45485.6	9,45785.0
9	9,43042.3	9,43353.6	9,43663.4	9,43971.6	9,44278.4	9,44583.6	9,44887.4	9,45189.7	9,45490.6	9,45790.0
10	9,43047.5	9,43358.8	9,43668.5	9,43976.8	9,44283.5	9,44588.7	9,44892.5	9,45194.8	9,45495.6	9,45794.9
11	9,43052.7	9,43363.9	9,43673.7	9,43981.9	9,44288.6	9,44593.8	9,44897.5	9,45199.8	9,45500.6	9,45799.9
12	9,43057.9	9,43369.1	9,43678.8	9,43987.0	9,44293.7	9,44598.9	9,44902.6	9,45204.8	9,45505.6	9,45804.9
13	9,43063.1	9,43374.3	9,43684.0	9,43992.1	9,44298.8	9,44603.9	9,44907.6	9,45209.8	9,45510.6	9,45809.9
14	9,43068.3	9,43379.5	9,43689.1	9,43997.3	9,44303.9	9,44609.0	9,44912.7	9,45214.9	9,45515.6	9,45814.8
15	9,43073.5	9,43384.7	9,43694.3	9,44002.4	9,44309.0	9,44614.1	9,44917.8	9,45219.9	9,45520.6	9,45819.8
16	9,43078.7	9,43389.8	9,43699.4	9,44007.5	9,44314.1	9,44619.2	9,44922.9	9,45224.9	9,45525.6	9,45824.8
17	9,43083.9	9,43395.0	9,43704.6	9,44012.6	9,44319.2	9,44624.2	9,44928.0	9,45229.9	9,45530.6	9,45829.8
18	9,43089.1	9,43400.2	9,43709.7	9,44017.8	9,44324.3	9,44629.3	9,44933.1	9,45234.9	9,45535.6	9,45834.7
19	9,43094.3	9,43405.4	9,43714.9	9,44022.9	9,44329.4	9,44634.4	9,44938.1	9,45240.0	9,45540.6	9,45839.7
20	9,43099.5	9,43410.5	9,43720.0	9,44028.0	9,44334.5	9,44639.4	9,44943.0	9,45245.0	9,45545.6	9,45844.7
21	9,43104.7	9,43415.7	9,43725.2	9,44033.1	9,44339.6	9,44644.5	9,44948.0	9,45250.0	9,45550.6	9,45849.7
22	9,43109.9	9,43420.9	9,43730.3	9,44038.2	9,44344.7	9,44649.6	9,44953.0	9,45255.0	9,45555.6	9,45854.6
23	9,43115.1	9,43426.0	9,43735.5	9,44043.3	9,44349.7	9,44654.7	9,44958.1	9,45260.0	9,45560.6	9,45859.6
24	9,43120.3	9,43431.2	9,43740.6	9,44048.5	9,44354.8	9,44659.7	9,44963.1	9,45265.1	9,45565.5	9,45864.6
25	9,43125.5	9,43436.4	9,43745.7	9,44053.6	9,44359.9	9,44664.8	9,44968.2	9,45270.1	9,45570.5	9,45869.6
26	9,43130.7	9,43441.6	9,43750.9	9,44058.7	9,44365.0	9,44669.9	9,44973.2	9,45275.1	9,45575.5	9,45874.5
27	9,43135.9	9,43446.7	9,43756.0	9,44063.8	9,44370.1	9,44674.9	9,44978.3	9,45280.1	9,45580.5	9,45879.5
28	9,43141.1	9,43451.9	9,43761.2	9,44068.9	9,44375.2	9,44680.0	9,44983.3	9,45285.1	9,45585.5	9,45884.5
29	9,43146.3	9,43457.1	9,43766.3	9,44074.1	9,44380.3	9,44685.1	9,44988.3	9,45290.2	9,45590.5	9,45889.4
30	9,43151.5	9,43462.2	9,43771.5	9,44079.2	9,44385.4	9,44690.1	9,44993.4	9,45295.2	9,45595.5	9,45894.4
31	9,43156.7	9,43467.4	9,43776.6	9,44084.3	9,44390.5	9,44695.2	9,44998.4	9,45300.2	9,45600.5	9,45899.4
32	9,43161.8	9,43472.5	9,43781.7	9,44089.4	9,44395.6	9,44700.3	9,45003.5	9,45305.2	9,45605.5	9,45904.3
33	9,43167.0	9,43477.7	9,43786.9	9,44094.5	9,44400.7	9,44705.3	9,45008.5	9,45310.2	9,45610.5	9,45909.3
34	9,43172.2	9,43482.9	9,43792.0	9,44099.6	9,44405.8	9,44710.4	9,45013.6	9,45315.2	9,45615.5	9,45914.3
35	9,43177.4	9,43488.0	9,43797.1	9,44104.7	9,44410.8	9,44715.5	9,45018.6	9,45320.3	9,45620.5	9,45919.2
36	9,43182.6	9,43493.2	9,43802.3	9,44109.9	9,44415.9	9,44720.5	9,45023.6	9,45325.3	9,45625.5	9,45924.2
37	9,43187.8	9,43498.4	9,43807.4	9,44115.0	9,44421.0	9,44725.6	9,45028.7	9,45330.3	9,45630.5	9,45929.2
38	9,43193.0	9,43503.5	9,43812.6	9,44120.1	9,44426.1	9,44730.7	9,45033.7	9,45335.3	9,45635.5	9,45934.2
39	9,43198.2	9,43508.7	9,43817.7	9,44125.2	9,44431.2	9,44735.7	9,45038.7	9,45340.3	9,45640.4	9,45939.1
40	9,43203.4	9,43513.9	9,43822.8	9,44130.3	9,44436.3	9,44740.8	9,45043.8	9,45345.3	9,45645.4	9,45944.1
41	9,43208.6	9,43519.0	9,43827.9	9,44135.4	9,44441.4	9,44745.8	9,45048.8	9,45350.4	9,45650.4	9,45949.0
42	9,43213.7	9,43524.2	9,43833.1	9,44140.5	9,44446.5	9,44750.9	9,45053.9	9,45355.4	9,45655.4	9,45954.0
43	9,43218.9	9,43529.3	9,43838.2	9,44145.6	9,44451.5	9,44756.0	9,45058.9	9,45360.4	9,45660.4	9,45959.0
44	9,43224.1	9,43534.5	9,43843.4	9,44150.8	9,44456.6	9,44761.0	9,45063.9	9,45365.4	9,45665.4	9,45963.9
45	9,43229.3	9,43539.7	9,43848.5	9,44155.9	9,44461.7	9,44766.1	9,45069.0	9,45370.4	9,45670.4	9,45968.9
46	9,43234.5	9,43544.8	9,43853.7	9,44161.0	9,44466.8	9,44771.1	9,45074.0	9,45375.4	9,45675.4	9,45973.9
47	9,43239.7	9,43550.0	9,43858.8	9,44166.1	9,44471.9	9,44776.2	9,45079.0	9,45380.4	9,45680.4	9,45978.8
48	9,43244.9	9,43555.2	9,43863.9	9,44171.2	9,44477.0	9,44781.3	9,45084.1	9,45385.4	9,45685.3	9,45983.8
49	9,43250.0	9,43560.3	9,43869.1	9,44176.3	9,44482.0	9,44786.3	9,45089.1	9,45390.5	9,45690.3	9,45988.7
50	9,43255.2	9,43565.5	9,43874.2	9,44181.4	9,44487.1	9,44791.4	9,45094.2	9,45395.5	9,45695.3	9,45993.7
51	9,43260.4	9,43570.6	9,43879.3	9,44186.5	9,44492.2	9,44796.5	9,45099.2	9,45400.5	9,45700.3	9,45998.7
52	9,43265.6	9,43575.8	9,43884.5	9,44191.6	9,44497.3	9,44801.5	9,45104.2	9,45405.5	9,45705.3	9,46003.6
53	9,43270.8	9,43580.9	9,43889.6	9,44196.7	9,44502.4	9,44806.6	9,45109.3	9,45410.5	9,45710.3	9,46008.6
54	9,43276.0	9,43586.1	9,43894.7	9,44201.8	9,44507.5	9,44811.6	9,45114.3	9,45415.5	9,45715.2	9,46013.6
55	9,43281.1	9,43591.2	9,43899.9	9,44206.9	9,44512.5	9,44816.7	9,45119.3	9,45420.5	9,45720.2	9,46018.5
56	9,43286.3	9,43596.4	9,43905.0	9,44212.0	9,44517.6	9,44821.7	9,45124.3	9,45425.5	9,45725.2	9,46023.5
57	9,43291.5	9,43601.6	9,43910.1	9,44217.1	9,44522.7	9,44826.8	9,45129.4	9,45430.5	9,45730.2	9,46028.4
58	9,43296.7	9,43606.7	9,43915.2	9,44222.2	9,44527.8	9,44831.8	9,45134.4	9,45435.5	9,45735.2	9,46033.4
59	9,43301.9	9,43611.9	9,43920.4	9,44227.3	9,44532.9	9,44836.9	9,45139.4	9,45440.5	9,45740.2	9,46038.3
60	9,43307.0	9,43617.0	9,43925.5	9,44232.4	9,44537.9	9,44841.9	9,45144.5	9,45445.5	9,45745.1	9,46043.3

n	20' 4.9	21' 4.9	22' 4.9	23' 4.9	24' 4.8	25' 4.8	26' 4.8	27' 4.8	28' 4.8	29' 4.7
0	9,46043.3	9,46340.0	9,46635.4	9,46929.3	9,47221.8	9,47512.9	9,47802.6	9,48090.9	9,48377.9	9,48663.5
1	9,46048.3	9,46345.0	9,46640.3	9,46934.1	9,47226.6	9,47517.7	9,47807.4	9,48095.7	9,48382.7	9,48668.3
2	9,46053.2	9,46349.9	9,46645.2	9,46939.0	9,47231.5	9,47522.5	9,47812.2	9,48100.5	9,48387.4	9,48673.0
3	9,46058.2	9,46354.8	9,46650.1	9,46943.9	9,47236.3	9,47527.4	9,47817.0	9,48105.3	9,48392.2	9,48677.8
4	9,46063.1	9,46359.8	9,46655.0	9,46948.8	9,47241.2	9,47532.2	9,47821.8	9,48110.1	9,48397.0	9,48682.5
5	9,46068.1	9,46364.7	9,46659.9	9,46953.7	9,47246.0	9,47537.1	9,47826.7	9,48114.9	9,48401.8	9,48687.3
6	9,46073.0	9,46369.6	9,46664.8	9,46958.6	9,47250.9	9,47541.9	9,47831.5	9,48119.7	9,48406.5	9,48692.0
7	9,46078.0	9,46374.6	9,46669.7	9,46963.5	9,47255.8	9,47546.7	9,47836.3	9,48124.5	9,48411.3	9,48696.8
8	9,46083.0	9,46379.5	9,46674.6	9,46968.3	9,47260.6	9,47551.6	9,47841.1	9,48129.3	9,48416.1	9,48701.5
9	9,46087.9	9,46384.4	9,46679.5	9,46973.2	9,47265.5	9,47556.4	9,47845.9	9,48134.1	9,48420.8	9,48706.3
10	9,46092.9	9,46389.4	9,46684.4	9,46978.1	9,47270.4	9,47561.2	9,47850.7	9,48138.8	9,48425.6	9,48711.0
11	9,46097.8	9,46394.3	9,46689.3	9,46983.0	9,47275.2	9,47566.1	9,47855.5	9,48143.6	9,48430.4	9,48715.7
12	9,46102.8	9,46399.2	9,46694.2	9,46987.9	9,47280.1	9,47570.9	9,47860.4	9,48148.4	9,48435.1	9,48720.5
13	9,46107.7	9,46404.2	9,46699.1	9,46992.8	9,47284.9	9,47575.8	9,47865.2	9,48153.2	9,48439.9	9,48725.2
14	9,46112.7	9,46409.1	9,46704.1	9,46997.6	9,47289.8	9,47580.6	9,47870.0	9,48158.0	9,48444.7	9,48730.0
15	9,46117.6	9,46411.0	9,46709.0	9,47002.5	9,47294.7	9,47585.4	9,47874.8	9,48162.8	9,48449.4	9,48734.7
16	9,46122.6	9,46418.9	9,46713.9	9,47007.4	9,47299.5	9,47590.3	9,47879.6	9,48167.6	9,48454.2	9,48739.5
17	9,46127.5	9,46423.9	9,46718.8	9,47012.3	9,47304.4	9,47595.1	9,47884.4	9,48172.4	9,48459.0	9,48744.2
18	9,46132.5	9,46428.8	9,46723.7	9,47017.2	9,47309.2	9,47599.9	9,47889.2	9,48177.2	9,48463.7	9,48748.9
19	9,46137.4	9,46433.7	9,46728.6	9,47022.0	9,47314.1	9,47604.8	9,47894.0	9,48181.9	9,48468.5	9,48753.7
20	9,46142.4	9,46438.6	9,46733.5	9,47026.9	9,47318.9	9,47609.6	9,47898.8	9,48186.7	9,48473.3	9,48758.4
21	9,46147.3	9,46443.6	9,46738.4	9,47031.8	9,47323.8	9,47614.4	9,47903.7	9,48191.5	9,48478.0	9,48763.2
22	9,46152.3	9,46448.5	9,46743.3	9,47036.7	9,47328.7	9,47619.2	9,47908.5	9,48196.3	9,48482.8	9,48767.9
23	9,46157.2	9,46453.4	9,46748.2	9,47041.5	9,47333.5	9,47624.1	9,47913.3	9,48201.1	9,48487.5	9,48772.6
24	9,46162.2	9,46458.3	9,46753.1	9,47046.4	9,47338.4	9,47628.9	9,47918.1	9,48205.9	9,48492.3	9,48777.3
25	9,46167.1	9,46463.2	9,46758.0	9,47051.3	9,47343.2	9,47633.7	9,47922.9	9,48210.7	9,48497.1	9,48782.1
26	9,46172.1	9,46468.2	9,46762.9	9,47056.2	9,47348.1	9,47638.6	9,47927.7	9,48215.4	9,48501.8	9,48786.9
27	9,46177.0	9,46473.1	9,46767.8	9,47061.1	9,47352.9	9,47643.4	9,47932.5	9,48220.3	9,48506.6	9,48791.6
28	9,46182.0	9,46478.0	9,46772.7	9,47065.9	9,47357.8	9,47648.2	9,47937.3	9,48225.0	9,48511.4	9,48796.3
29	9,46186.9	9,46483.0	9,46777.6	9,47070.8	9,47362.6	9,47653.1	9,47942.1	9,48229.8	9,48516.1	9,48801.1
30	9,46191.9	9,46487.9	9,46782.5	9,47075.7	9,47367.5	9,47657.9	9,47946.9	9,48234.6	9,48520.9	9,48805.8
31	9,46196.8	9,46492.8	9,46787.4	9,47080.6	9,47372.3	9,47662.7	9,47951.7	9,48239.4	9,48525.6	9,48810.6
32	9,46201.8	9,46497.7	9,46792.3	9,47085.4	9,47377.2	9,47667.5	9,47956.5	9,48244.1	9,48530.4	9,48815.3
33	9,46206.7	9,46502.6	9,46797.2	9,47090.3	9,47382.0	9,47672.4	9,47961.3	9,48248.9	9,48535.2	9,48820.0
34	9,46211.7	9,46507.6	9,46802.1	9,47095.2	9,47386.9	9,47677.2	9,47966.1	9,48253.7	9,48539.9	9,48824.8
35	9,46216.6	9,46512.5	9,46807.0	9,47100.1	9,47391.7	9,47682.0	9,47970.9	9,48258.5	9,48544.7	9,48829.5
36	9,46221.5	9,46517.4	9,46811.9	9,47104.9	9,47396.6	9,47686.9	9,47975.7	9,48263.3	9,48549.4	9,48834.2
37	9,46226.5	9,46522.3	9,46816.8	9,47109.8	9,47401.4	9,47691.7	9,47980.6	9,48268.1	9,48554.2	9,48839.0
38	9,46231.4	9,46527.2	9,46821.7	9,47114.7	9,47406.3	9,47696.5	9,47985.4	9,48272.8	9,48558.9	9,48843.7
39	9,46236.3	9,46532.2	9,46826.6	9,47119.6	9,47411.1	9,47701.3	9,47990.2	9,48277.6	9,48563.7	9,48848.5
40	9,46241.3	9,46537.1	9,46831.4	9,47124.4	9,47416.0	9,47706.2	9,47995.0	9,48282.4	9,48568.5	9,48853.2
41	9,46246.2	9,46542.0	9,46836.3	9,47129.3	9,47420.8	9,47711.0	9,47999.8	9,48287.2	9,48573.2	9,48857.9
42	9,46251.2	9,46546.9	9,46841.2	9,47134.2	9,47425.7	9,47715.8	9,48004.6	9,48291.9	9,48578.0	9,48862.6
43	9,46256.1	9,46551.8	9,46846.1	9,47139.0	9,47430.5	9,47720.6	9,48009.4	9,48296.7	9,48582.7	9,48867.4
44	9,46261.1	9,46556.7	9,46851.0	9,47143.9	9,47435.4	9,47725.5	9,48014.2	9,48301.5	9,48587.5	9,48872.1
45	9,46266.0	9,46561.7	9,46855.9	9,47148.8	9,47440.2	9,47730.3	9,48019.0	9,48306.3	9,48592.2	9,48876.9
46	9,46270.9	9,46566.6	9,46860.8	9,47153.6	9,47445.1	9,47735.1	9,48023.8	9,48311.1	9,48597.0	9,48881.6
47	9,46275.9	9,46571.5	9,46865.7	9,47158.5	9,47449.9	9,47739.9	9,48028.6	9,48315.8	9,48601.8	9,48886.3
48	9,46280.8	9,46576.4	9,46870.6	9,47163.4	9,47454.7	9,47744.7	9,48033.4	9,48320.6	9,48606.5	9,48891.0
49	9,46285.7	9,46581.3	9,46875.5	9,47168.2	9,47459.6	9,47749.6	9,48038.2	9,48325.4	9,48611.3	9,48895.8
50	9,46290.7	9,46586.2	9,46880.4	9,47173.1	9,47464.4	9,47754.4	9,48043.0	9,48330.2	9,48616.0	9,48900.6
51	9,46295.6	9,46591.1	9,46885.3	9,47178.0	9,47469.3	9,47759.2	9,48047.8	9,48334.9	9,48620.8	9,48905.3
52	9,46300.6	9,46596.1	9,46890.1	9,47182.8	9,47474.1	9,47764.0	9,48052.6	9,48339.7	9,48625.5	9,48910.0
53	9,46305.5	9,46601.0	9,46895.0	9,47187.7	9,47479.0	9,47768.8	9,48057.4	9,48344.5	9,48630.3	9,48914.7
54	9,46310.4	9,46605.9	9,46899.9	9,47192.6	9,47483.8	9,47773.7	9,48062.1	9,48349.3	9,48635.0	9,48919.4
55	9,46315.4	9,46610.8	9,46904.8	9,47197.4	9,47488.7	9,47778.5	9,48066.9	9,48354.0	9,48639.8	9,48924.2
56	9,46320.3	9,46615.7	9,46909.7	9,47202.3	9,47493.5	9,47783.3	9,48071.7	9,48358.8	9,48644.5	9,48928.9
57	9,46325.2	9,46620.6	9,46914.6	9,47207.2	9,47498.3	9,47788.1	9,48076.5	9,48363.6	9,48649.3	9,48933.6
58	9,46330.2	9,46625.5	9,46919.5	9,47212.0	9,47503.2	9,47792.9	9,48081.3	9,48368.4	9,48654.0	9,48938.3
59	9,46335.1	9,46630.4	9,46924.4	9,47216.9	9,47508.0	9,47797.8	9,48086.1	9,48373.1	9,48658.8	9,48943.0
60	9,46340.0	9,46635.4	9,46929.3	9,47221.8	9,47512.9	9,47802.6	9,48090.9	9,48377.9	9,48663.5	9,48947.8

Log. Sin². $\frac{1}{2}$ t. 4¹.

	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'
	4.7	4.7	4.7	4.7	4.6	4.6	4.6	4.6	4.6	4.5
0	9,48947.8	9,49230.7	9,49512.3	9,49792.6	9,50071.6	9,50349.2	9,50625.6	9,50900.7	9,51174.5	9,51447.0
1	9,48952.5	9,49235.4	9,49517.0	9,49797.3	9,50076.2	9,50353.8	9,50630.2	9,50905.3	9,51179.0	9,51451.5
2	9,48957.2	9,49240.1	9,49521.7	9,49801.9	9,50080.9	9,50358.5	9,50634.8	9,50909.8	9,51183.6	9,51456.1
3	9,48962.0	9,49244.8	9,49526.4	9,49806.6	9,50085.5	9,50363.1	9,50639.4	9,50914.4	9,51188.1	9,51460.6
4	9,48966.7	9,49249.5	9,49531.1	9,49811.2	9,50090.1	9,50367.7	9,50644.0	9,50919.0	9,51192.7	9,51465.1
5	9,48971.4	9,49254.3	9,49535.7	9,49815.9	9,50094.8	9,50372.3	9,50648.6	9,50923.6	9,51197.2	9,51469.7
6	9,48976.1	9,49259.0	9,49540.4	9,49820.6	9,50099.4	9,50376.9	9,50653.2	9,50928.1	9,51201.8	9,51474.2
7	9,48980.9	9,49263.7	9,49545.1	9,49825.2	9,50104.0	9,50381.6	9,50657.8	9,50932.7	9,51206.3	9,51478.7
8	9,48985.6	9,49268.4	9,49549.8	9,49829.9	9,50108.7	9,50386.2	9,50662.4	9,50937.3	9,51210.9	9,51483.2
9	9,48990.3	9,49273.1	9,49554.5	9,49834.5	9,50113.3	9,50390.8	9,50667.0	9,50941.8	9,51215.4	9,51487.8
10	9,48995.0	9,49277.8	9,49559.1	9,49839.2	9,50117.9	9,50395.4	9,50671.5	9,50946.4	9,51220.0	9,51492.3
11	9,48999.8	9,49282.5	9,49563.8	9,49843.9	9,50122.6	9,50400.0	9,50676.1	9,50951.0	9,51224.5	9,51496.8
12	9,49004.5	9,49287.2	9,49568.5	9,49848.5	9,50127.2	9,50404.6	9,50680.7	9,50955.5	9,51229.1	9,51501.4
13	9,49009.2	9,49291.9	9,49573.2	9,49853.2	9,50131.9	9,50409.2	9,50685.3	9,50960.1	9,51233.6	9,51505.9
14	9,49013.9	9,49296.6	9,49577.8	9,49857.8	9,50136.5	9,50413.8	9,50689.9	9,50964.7	9,51238.2	9,51510.4
15	9,49018.7	9,49301.3	9,49582.5	9,49862.5	9,50141.1	9,50418.5	9,50694.5	9,50969.3	9,51242.7	9,51514.9
16	9,49023.4	9,49306.0	9,49587.2	9,49867.1	9,50145.7	9,50423.1	9,50699.1	9,50973.8	9,51247.3	9,51519.5
17	9,49028.1	9,49310.7	9,49591.9	9,49871.8	9,50150.4	9,50427.7	9,50703.7	9,50978.4	9,51251.8	9,51524.0
18	9,49032.8	9,49315.4	9,49596.6	9,49876.4	9,50155.0	9,50432.3	9,50708.3	9,50983.0	9,51256.4	9,51528.5
19	9,49037.5	9,49320.1	9,49601.2	9,49881.1	9,50159.7	9,50436.9	9,50712.9	9,50987.5	9,51260.9	9,51533.0
20	9,49042.3	9,49324.7	9,49605.9	9,49885.7	9,50164.3	9,50441.5	9,50717.4	9,50992.1	9,51265.5	9,51537.6
21	9,49047.0	9,49329.4	9,49610.6	9,49890.4	9,50168.9	9,50446.1	9,50722.0	9,50996.7	9,51270.0	9,51542.1
22	9,49051.7	9,49334.1	9,49615.3	9,49895.1	9,50173.5	9,50450.7	9,50726.6	9,51001.2	9,51274.5	9,51546.6
23	9,49056.4	9,49338.8	9,49619.9	9,49899.7	9,50178.2	9,50455.3	9,50731.2	9,51005.8	9,51279.1	9,51551.1
24	9,49061.1	9,49343.5	9,49624.6	9,49904.4	9,50182.8	9,50459.9	9,50735.8	9,51010.4	9,51283.6	9,51555.7
25	9,49065.9	9,49348.2	9,49629.3	9,49909.0	9,50187.4	9,50464.6	9,50740.4	9,51014.9	9,51288.2	9,51560.2
26	9,49070.6	9,49352.9	9,49633.9	9,49913.7	9,50192.1	9,50469.2	9,50745.0	9,51019.5	9,51292.7	9,51564.7
27	9,49075.3	9,49357.6	9,49638.6	9,49918.3	9,50196.7	9,50473.8	9,50749.6	9,51024.1	9,51297.3	9,51569.2
28	9,49080.0	9,49362.3	9,49643.3	9,49923.0	9,50201.3	9,50478.4	9,50754.1	9,51028.6	9,51301.8	9,51573.7
29	9,49084.7	9,49367.0	9,49648.0	9,49927.6	9,50206.0	9,50483.0	9,50758.7	9,51033.2	9,51306.4	9,51578.3
30	9,49089.4	9,49371.7	9,49652.6	9,49932.3	9,50210.6	9,50487.6	9,50763.3	9,51037.7	9,51310.9	9,51582.8
31	9,49094.1	9,49376.4	9,49657.3	9,49936.9	9,50215.2	9,50492.2	9,50767.9	9,51042.3	9,51315.4	9,51587.3
32	9,49098.9	9,49381.1	9,49662.0	9,49941.6	9,50219.8	9,50496.8	9,50772.5	9,51046.9	9,51320.0	9,51591.8
33	9,49103.6	9,49385.8	9,49666.7	9,49946.2	9,50224.5	9,50501.4	9,50777.1	9,51051.4	9,51324.5	9,51596.4
34	9,49108.3	9,49390.5	9,49671.3	9,49950.9	9,50229.1	9,50506.0	9,50781.6	9,51056.0	9,51329.1	9,51600.9
35	9,49113.0	9,49395.2	9,49676.0	9,49955.5	9,50233.7	9,50510.6	9,50786.2	9,51060.6	9,51333.6	9,51605.4
36	9,49117.7	9,49399.8	9,49680.7	9,49960.1	9,50238.3	9,50515.2	9,50790.8	9,51065.1	9,51338.1	9,51609.9
37	9,49122.4	9,49404.5	9,49685.3	9,49964.8	9,50243.0	9,50519.8	9,50795.4	9,51069.7	9,51342.7	9,51614.4
38	9,49127.1	9,49409.2	9,49690.0	9,49969.4	9,50247.6	9,50524.4	9,50800.0	9,51074.2	9,51347.2	9,51618.9
39	9,49131.9	9,49413.9	9,49694.7	9,49974.1	9,50252.2	9,50529.0	9,50804.6	9,51078.8	9,51351.8	9,51623.5
40	9,49136.6	9,49418.6	9,49699.3	9,49978.7	9,50256.8	9,50533.6	9,50809.1	9,51083.4	9,51356.3	9,51628.0
41	9,49141.3	9,49423.3	9,49704.0	9,49983.4	9,50261.5	9,50538.2	9,50813.7	9,51087.9	9,51360.8	9,51632.5
42	9,49146.0	9,49428.0	9,49708.7	9,49988.0	9,50266.1	9,50542.8	9,50818.3	9,51092.5	9,51365.4	9,51637.0
43	9,49150.7	9,49432.7	9,49713.3	9,49992.7	9,50270.7	9,50547.4	9,50822.9	9,51097.0	9,51369.9	9,51641.5
44	9,49155.4	9,49437.4	9,49718.0	9,49997.3	9,50275.3	9,50552.0	9,50827.5	9,51101.6	9,51374.5	9,51646.0
45	9,49160.1	9,49442.1	9,49722.7	9,50002.0	9,50280.0	9,50556.6	9,50832.0	9,51106.2	9,51379.0	9,51650.6
46	9,49164.8	9,49446.7	9,49727.3	9,50006.6	9,50284.6	9,50561.2	9,50836.6	9,51110.7	9,51383.5	9,51655.1
47	9,49169.5	9,49451.4	9,49732.0	9,50011.3	9,50289.2	9,50565.8	9,50841.2	9,51115.3	9,51388.1	9,51659.6
48	9,49174.2	9,49456.1	9,49736.7	9,50015.9	9,50293.8	9,50570.4	9,50845.8	9,51119.8	9,51392.6	9,51664.1
49	9,49179.0	9,49460.8	9,49741.3	9,50020.5	9,50298.4	9,50575.0	9,50850.4	9,51124.4	9,51397.1	9,51668.6
50	9,49183.7	9,49465.5	9,49746.0	9,50025.2	9,50303.1	9,50579.6	9,50854.9	9,51128.9	9,51401.7	9,51673.1
51	9,49188.4	9,49470.2	9,49750.7	9,50029.8	9,50307.7	9,50584.2	9,50859.5	9,51133.5	9,51406.2	9,51677.7
52	9,49193.1	9,49474.9	9,49755.3	9,50034.5	9,50312.3	9,50588.8	9,50864.1	9,51138.0	9,51410.7	9,51682.2
53	9,49197.8	9,49479.6	9,49760.0	9,50039.1	9,50316.9	9,50593.4	9,50868.7	9,51142.6	9,51415.3	9,51686.7
54	9,49202.5	9,49484.2	9,49764.7	9,50043.7	9,50321.5	9,50598.0	9,50873.2	9,51147.2	9,51419.8	9,51691.2
55	9,49207.2	9,49488.9	9,49769.3	9,50048.4	9,50326.2	9,50602.6	9,50877.8	9,51151.7	9,51424.3	9,51695.7
56	9,49211.9	9,49493.6	9,49774.0	9,50053.0	9,50330.8	9,50607.2	9,50882.4	9,51156.3	9,51428.9	9,51700.2
57	9,49216.6	9,49498.3	9,49778.6	9,50057.7	9,50335.4	9,50611.8	9,50887.0	9,51160.8	9,51433.4	9,51704.7
58	9,49221.3	9,49503.0	9,49783.3	9,50062.3	9,50340.0	9,50616.4	9,50891.5	9,51165.4	9,51437.9	9,51709.2
59	9,49226.0	9,49507.7	9,49788.0	9,50066.9	9,50344.6	9,50621.0	9,50896.1	9,51169.9	9,51442.5	9,51713.8
60	9,49230.7	9,49512.3	9,49792.6	9,50071.6	9,50349.2	9,50625.6	9,50900.7	9,51174.5	9,51447.0	9,51718.3

n	40'	41'	42'	43'	44'	45'	46'	47'	48'	49'
	4.5	4.5	4.5	4.4	4.4	4.4	4.4	4.4	4.3	4.3
0	9,51718.3	9,51988.3	9,52257.0	9,52524.5	9,52790.8	9,53055.9	9,53319.7	9,53582.3	9,53843.7	9,54104.0
1	9,51722.8	9,51992.8	9,52261.3	9,52529.0	9,52795.2	9,53060.3	9,53324.1	9,53586.7	9,53848.1	9,54108.3
2	9,51727.3	9,51997.2	9,52266.0	9,52533.4	9,52799.7	9,53064.7	9,53328.5	9,53591.1	9,53852.4	9,54112.6
3	9,51731.8	9,52001.7	9,52270.4	9,52537.9	9,52804.1	9,53069.1	9,53332.9	9,53595.4	9,53856.8	9,54116.9
4	9,51736.3	9,52006.2	9,52274.9	9,52542.3	9,52808.5	9,53073.5	9,53337.2	9,53599.8	9,53861.1	9,54121.3
5	9,51740.8	9,52010.7	9,52279.4	9,52546.8	9,52812.9	9,53077.9	9,53341.6	9,53604.2	9,53865.5	9,54125.6
6	9,51745.3	9,52015.2	9,52283.8	9,52551.2	9,52817.4	9,53082.3	9,53346.0	9,53608.5	9,53869.8	9,54129.9
7	9,51749.8	9,52019.7	9,52288.3	9,52555.7	9,52821.8	9,53086.7	9,53350.4	9,53612.9	9,53874.2	9,54134.2
8	9,51754.3	9,52024.2	9,52292.8	9,52560.1	9,52826.2	9,53091.1	9,53354.8	9,53617.2	9,53878.5	9,54138.6
9	9,51758.8	9,52028.7	9,52297.2	9,52564.6	9,52830.6	9,53095.5	9,53359.2	9,53621.6	9,53882.9	9,54142.9
10	9,51763.3	9,52033.1	9,52301.7	9,52569.0	9,52835.1	9,53099.9	9,53363.5	9,53626.0	9,53887.2	9,54147.2
11	9,51767.9	9,52037.6	9,52306.2	9,52573.4	9,52839.5	9,53104.3	9,53367.9	9,53630.3	9,53891.5	9,54151.5
12	9,51772.4	9,52042.1	9,52310.6	9,52577.9	9,52843.9	9,53108.7	9,53372.3	9,53634.7	9,53895.9	9,54155.9
13	9,51776.9	9,52046.6	9,52315.1	9,52582.3	9,52848.3	9,53113.1	9,53376.7	9,53639.1	9,53900.2	9,54160.2
14	9,51781.4	9,52051.1	9,52319.5	9,52586.8	9,52852.8	9,53117.5	9,53381.1	9,53643.4	9,53904.6	9,54164.5
15	9,51785.9	9,52055.6	9,52324.0	9,52591.2	9,52857.2	9,53121.9	9,53385.5	9,53647.8	9,53908.9	9,54168.8
16	9,51790.4	9,52060.1	9,52328.5	9,52595.7	9,52861.6	9,53126.3	9,53389.8	9,53652.2	9,53913.3	9,54173.2
17	9,51794.9	9,52064.5	9,52332.9	9,52600.1	9,52866.0	9,53130.7	9,53394.2	9,53656.5	9,53917.6	9,54177.5
18	9,51799.4	9,52069.0	9,52337.4	9,52604.5	9,52870.5	9,53135.1	9,53398.6	9,53660.9	9,53921.9	9,54181.8
19	9,51803.9	9,52073.5	9,52341.9	9,52609.0	9,52874.9	9,53139.5	9,53403.0	9,53665.2	9,53926.3	9,54186.1
20	9,51808.4	9,52078.0	9,52346.3	9,52613.4	9,52879.3	9,53143.9	9,53407.4	9,53669.6	9,53930.6	9,54190.4
21	9,51812.9	9,52082.5	9,52350.8	9,52617.9	9,52883.7	9,53148.3	9,53411.8	9,53674.0	9,53935.0	9,54194.8
22	9,51817.4	9,52087.0	9,52355.2	9,52622.3	9,52888.1	9,53152.7	9,53416.1	9,53678.3	9,53939.3	9,54199.1
23	9,51821.9	9,52091.4	9,52359.7	9,52626.8	9,52892.6	9,53157.1	9,53420.5	9,53682.7	9,53943.6	9,54203.4
24	9,51826.4	9,52095.9	9,52364.2	9,52631.2	9,52897.0	9,53161.5	9,53424.9	9,53687.0	9,53948.0	9,54207.7
25	9,51830.9	9,52100.4	9,52368.7	9,52635.6	9,52901.4	9,53165.9	9,53429.3	9,53691.4	9,53952.3	9,54212.0
26	9,51835.4	9,52104.9	9,52373.1	9,52640.1	9,52905.8	9,53170.3	9,53433.6	9,53695.7	9,53956.6	9,54216.4
27	9,51839.9	9,52109.4	9,52377.6	9,52644.5	9,52910.2	9,53174.7	9,53438.0	9,53700.1	9,53961.0	9,54220.7
28	9,51844.4	9,52113.8	9,52382.0	9,52648.9	9,52914.7	9,53179.1	9,53442.4	9,53704.5	9,53965.3	9,54225.0
29	9,51848.9	9,52118.3	9,52386.5	9,52653.4	9,52919.1	9,53183.5	9,53446.8	9,53708.8	9,53969.7	9,54229.3
30	9,51853.4	9,52122.8	9,52390.9	9,52657.8	9,52923.5	9,53187.9	9,53451.2	9,53713.2	9,53974.0	9,54233.6
31	9,51857.9	9,52127.3	9,52395.4	9,52662.3	9,52927.9	9,53192.3	9,53455.5	9,53717.5	9,53978.3	9,54237.9
32	9,51862.4	9,52131.8	9,52399.8	9,52666.7	9,52932.3	9,53196.7	9,53459.9	9,53721.9	9,53982.7	9,54242.3
33	9,51866.9	9,52136.2	9,52404.3	9,52671.1	9,52936.8	9,53201.1	9,53464.3	9,53726.3	9,53987.0	9,54246.6
34	9,51871.4	9,52140.7	9,52408.8	9,52675.6	9,52941.2	9,53205.5	9,53468.7	9,53730.6	9,53991.3	9,54250.9
35	9,51875.9	9,52145.2	9,52413.2	9,52680.0	9,52945.6	9,53209.9	9,53473.0	9,53735.0	9,53995.7	9,54255.2
36	9,51880.4	9,52149.7	9,52417.7	9,52684.4	9,52950.0	9,53214.3	9,53477.4	9,53739.3	9,54000.0	9,54259.5
37	9,51884.9	9,52154.1	9,52422.1	9,52688.9	9,52954.4	9,53218.7	9,53481.8	9,53743.7	9,54004.4	9,54263.8
38	9,51889.4	9,52158.6	9,52426.6	9,52693.3	9,52958.8	9,53223.1	9,53486.2	9,53748.0	9,54008.7	9,54268.2
39	9,51893.9	9,52163.1	9,52431.0	9,52697.8	9,52963.2	9,53227.5	9,53490.5	9,53752.4	9,54013.0	9,54272.5
40	9,51898.4	9,52167.6	9,52435.5	9,52702.2	9,52967.6	9,53231.9	9,53494.9	9,53756.7	9,54017.4	9,54276.8
41	9,51902.9	9,52172.0	9,52440.0	9,52706.6	9,52972.1	9,53236.3	9,53499.3	9,53761.1	9,54021.7	9,54281.1
42	9,51907.4	9,52176.5	9,52444.4	9,52711.1	9,52976.5	9,53240.7	9,53503.7	9,53765.4	9,54026.0	9,54285.4
43	9,51911.9	9,52181.0	9,52448.9	9,52715.5	9,52980.9	9,53245.1	9,53508.0	9,53769.8	9,54030.4	9,54289.7
44	9,51916.4	9,52185.5	9,52453.3	9,52719.9	9,52985.3	9,53249.5	9,53512.4	9,53774.1	9,54034.7	9,54294.0
45	9,51920.9	9,52189.9	9,52457.8	9,52724.4	9,52989.7	9,53253.9	9,53516.8	9,53778.5	9,54039.0	9,54298.4
46	9,51925.4	9,52194.4	9,52462.2	9,52728.8	9,52994.1	9,53258.2	9,53521.1	9,53782.8	9,54043.3	9,54302.7
47	9,51929.9	9,52198.9	9,52466.7	9,52733.2	9,52998.5	9,53262.6	9,53525.5	9,53787.2	9,54047.7	9,54307.0
48	9,51934.4	9,52203.4	9,52471.1	9,52737.6	9,53002.9	9,53267.0	9,53529.9	9,53791.5	9,54052.0	9,54311.3
49	9,51938.9	9,52207.8	9,52475.6	9,52742.1	9,53007.4	9,53271.4	9,53534.3	9,53795.9	9,54056.4	9,54315.6
50	9,51943.3	9,52212.3	9,52480.0	9,52746.5	9,53011.8	9,53275.8	9,53538.6	9,53800.3	9,54060.7	9,54319.9
51	9,51947.8	9,52216.8	9,52484.5	9,52750.9	9,53016.2	9,53280.2	9,53543.0	9,53804.6	9,54065.0	9,54324.2
52	9,51952.3	9,52221.3	9,52488.9	9,52755.4	9,53020.6	9,53284.6	9,53547.4	9,53809.0	9,54069.3	9,54328.5
53	9,51956.8	9,52225.7	9,52493.4	9,52759.8	9,53025.0	9,53289.0	9,53551.7	9,53813.3	9,54073.7	9,54332.8
54	9,51961.3	9,52230.2	9,52497.8	9,52764.2	9,53029.4	9,53293.4	9,53556.1	9,53817.6	9,54078.0	9,54337.1
55	9,51965.8	9,52234.7	9,52502.3	9,52768.7	9,53033.8	9,53297.8	9,53560.5	9,53822.0	9,54082.3	9,54341.5
56	9,51970.3	9,52239.1	9,52506.7	9,52773.1	9,53038.2	9,53302.1	9,53564.8	9,53826.3	9,54086.6	9,54345.8
57	9,51974.8	9,52243.6	9,52511.2	9,52777.5	9,53042.6	9,53306.5	9,53569.2	9,53830.7	9,54091.0	9,54350.1
58	9,51979.3	9,52248.1	9,52515.6	9,52782.0	9,53047.0	9,53310.9	9,53573.6	9,53835.0	9,54095.3	9,54354.4
59	9,51983.8	9,52252.5	9,52520.1	9,52786.4	9,53051.5	9,53315.3	9,53578.0	9,53839.4	9,54099.6	9,54358.7
60	9,51988.3	9,52257.0	9,52524.5	9,52790.8	9,53055.9	9,53319.7	9,53582.3	9,53843.7	9,54104.0	9,54363.0

Log. Sin². $\frac{1}{2}$ t. 4th.

n	50'	51'	52'	53'	54'	55'	56'	57'	58'	59'
	4.3	4.3	4.3	4.2	4.2	4.2	4.2	4.2	4.1	4.1
0	9,54363.0	9,54620.8	9,54877.5	9,55133.0	9,55387.4	9,55640.6	9,55892.6	9,56143.5	9,56393.3	9,56641.9
1	9,54367.3	9,54625.1	9,54881.8	9,55137.3	9,55391.6	9,55644.8	9,55896.8	9,56147.7	9,56397.4	9,56646.0
2	9,54371.6	9,54629.4	9,54886.1	9,55141.5	9,55395.8	9,55649.0	9,55901.0	9,56151.8	9,56401.6	9,56650.2
3	9,54375.9	9,54633.7	9,54890.3	9,55145.8	9,55400.1	9,55653.2	9,55903.2	9,56156.0	9,56405.7	9,56654.3
4	9,54380.2	9,54638.0	9,54894.6	9,55150.0	9,55404.3	9,55657.4	9,55909.4	9,56160.2	9,56409.9	9,56658.4
5	9,54384.5	9,54642.3	9,54898.9	9,55154.3	9,55408.5	9,55661.6	9,55913.6	9,56164.4	9,56414.0	9,56662.6
6	9,54388.8	9,54646.6	9,54903.1	9,55158.5	9,55412.7	9,55665.8	9,55917.7	9,56168.5	9,56418.2	9,56666.7
7	9,54393.1	9,54650.9	9,54907.4	9,55162.8	9,55417.0	9,55670.0	9,55921.9	9,56172.7	9,56422.3	9,56670.8
8	9,54397.4	9,54655.1	9,54911.7	9,55167.0	9,55421.2	9,55674.2	9,55926.1	9,56176.9	9,56426.5	9,56675.0
9	9,54401.8	9,54659.4	9,54915.9	9,55171.3	9,55425.4	9,55678.4	9,55930.3	9,56181.0	9,56430.6	9,56679.1
10	9,54406.1	9,54663.7	9,54920.2	9,55175.5	9,55429.7	9,55682.6	9,55934.5	9,56185.2	9,56434.8	9,56683.2
11	9,54410.4	9,54668.0	9,54924.5	9,55179.7	9,55433.9	9,55686.9	9,55938.7	9,56189.4	9,56438.9	9,56687.4
12	9,54414.7	9,54672.3	9,54928.7	9,55184.0	9,55438.1	9,55691.1	9,55942.9	9,56193.5	9,56443.1	9,56691.5
13	9,54419.0	9,54676.6	9,54933.0	9,55188.2	9,55442.3	9,55695.3	9,55947.1	9,56197.7	9,56447.2	9,56695.6
14	9,54423.3	9,54680.8	9,54937.2	9,55192.5	9,55446.6	9,55699.5	9,55951.3	9,56201.9	9,56451.4	9,56699.8
15	9,54427.6	9,54685.1	9,54941.5	9,55196.7	9,55450.8	9,55703.7	9,55955.4	9,56206.1	9,56455.5	9,56703.9
16	9,54431.9	9,54689.4	9,54945.8	9,55201.0	9,55455.0	9,55707.9	9,55959.6	9,56210.2	9,56459.7	9,56708.0
17	9,54436.2	9,54693.7	9,54950.0	9,55205.2	9,55459.2	9,55712.1	9,55963.8	9,56214.4	9,56463.8	9,56712.2
18	9,54440.5	9,54698.0	9,54954.3	9,55209.5	9,55463.5	9,55716.3	9,55968.0	9,56218.6	9,56468.0	9,56716.3
19	9,54444.8	9,54702.3	9,54958.6	9,55213.7	9,55467.7	9,55720.5	9,55972.2	9,56222.7	9,56472.1	9,56720.4
20	9,54449.1	9,54706.5	9,54962.8	9,55217.9	9,55471.9	9,55724.7	9,55976.4	9,56226.9	9,56476.3	9,56724.5
21	9,54453.4	9,54710.8	9,54967.1	9,55222.2	9,55476.1	9,55728.9	9,55980.6	9,56231.1	9,56480.4	9,56728.7
22	9,54457.7	9,54715.1	9,54971.3	9,55226.4	9,55480.3	9,55733.1	9,55984.7	9,56235.2	9,56484.6	9,56732.8
23	9,54462.0	9,54719.4	9,54975.6	9,55230.7	9,55484.6	9,55737.3	9,55988.9	9,56239.4	9,56488.7	9,56736.9
24	9,54466.3	9,54723.7	9,54979.9	9,55234.9	9,55488.8	9,55741.5	9,55993.1	9,56243.5	9,56492.9	9,56741.1
25	9,54470.6	9,54727.9	9,54984.1	9,55239.1	9,55493.0	9,55745.7	9,55997.3	9,56247.7	9,56497.0	9,56745.2
26	9,54474.9	9,54732.2	9,54988.4	9,55243.4	9,55497.2	9,55749.9	9,56001.5	9,56251.9	9,56501.2	9,56749.3
27	9,54479.2	9,54736.5	9,54992.6	9,55247.6	9,55501.4	9,55754.1	9,56005.7	9,56256.0	9,56505.3	9,56753.4
28	9,54483.5	9,54740.8	9,54996.9	9,55251.9	9,55505.7	9,55758.3	9,56009.8	9,56260.2	9,56509.4	9,56757.6
29	9,54487.8	9,54745.1	9,55001.2	9,55256.1	9,55509.9	9,55762.5	9,56014.0	9,56264.4	9,56513.6	9,56761.7
30	9,54492.1	9,54749.3	9,55005.4	9,55260.3	9,55514.1	9,55766.7	9,56018.2	9,56268.5	9,56517.7	9,56765.8
31	9,54496.4	9,54753.6	9,55009.7	9,55264.6	9,55518.3	9,55770.9	9,56022.4	9,56272.7	9,56521.9	9,56769.9
32	9,54500.7	9,54757.9	9,55013.9	9,55268.8	9,55522.6	9,55775.1	9,56026.6	9,56276.9	9,56526.0	9,56774.1
33	9,54505.0	9,54762.2	9,55018.2	9,55273.1	9,55526.8	9,55779.3	9,56030.7	9,56281.0	9,56530.2	9,56778.2
34	9,54509.3	9,54766.4	9,55022.4	9,55277.3	9,55531.0	9,55783.5	9,56034.9	9,56285.2	9,56534.3	9,56782.3
35	9,54513.6	9,54770.7	9,55026.7	9,55281.5	9,55535.2	9,55787.7	9,56039.1	9,56289.3	9,56538.5	9,56786.4
36	9,54517.8	9,54775.0	9,55031.0	9,55285.8	9,55539.4	9,55791.9	9,56043.3	9,56293.5	9,56542.6	9,56790.6
37	9,54522.1	9,54779.2	9,55035.2	9,55290.0	9,55543.6	9,55796.1	9,56047.4	9,56297.7	9,56546.7	9,56794.7
38	9,54526.4	9,54783.5	9,55039.5	9,55294.2	9,55547.9	9,55800.3	9,56051.6	9,56301.8	9,56550.9	9,56798.8
39	9,54530.7	9,54787.8	9,55043.7	9,55298.5	9,55552.1	9,55804.5	9,56055.8	9,56306.0	9,56555.0	9,56802.9
40	9,54535.0	9,54792.1	9,55048.0	9,55302.7	9,55556.3	9,55808.7	9,56060.0	9,56310.1	9,56559.2	9,56807.0
41	9,54539.3	9,54796.4	9,55052.2	9,55307.0	9,55560.5	9,55812.9	9,56064.2	9,56314.3	9,56563.3	9,56811.2
42	9,54543.6	9,54800.6	9,55056.5	9,55311.2	9,55564.7	9,55817.1	9,56068.4	9,56318.5	9,56567.4	9,56815.3
43	9,54547.9	9,54804.9	9,55060.8	9,55315.4	9,55568.9	9,55821.3	9,56072.5	9,56322.6	9,56571.6	9,56819.4
44	9,54552.2	9,54809.2	9,55065.0	9,55319.7	9,55573.2	9,55825.5	9,56076.7	9,56326.8	9,56575.7	9,56823.5
45	9,54556.5	9,54813.5	9,55069.3	9,55323.9	9,55577.4	9,55829.7	9,56080.9	9,56330.9	9,56579.9	9,56827.7
46	9,54560.8	9,54817.7	9,55073.5	9,55328.1	9,55581.6	9,55833.9	9,56085.1	9,56335.1	9,56584.0	9,56831.8
47	9,54565.1	9,54822.0	9,55077.8	9,55332.4	9,55585.8	9,55838.1	9,56089.2	9,56339.3	9,56588.1	9,56835.9
48	9,54569.4	9,54826.3	9,55082.0	9,55336.6	9,55590.0	9,55842.3	9,56093.4	9,56343.4	9,56592.3	9,56840.0
49	9,54573.7	9,54830.6	9,55086.3	9,55340.8	9,55594.2	9,55846.5	9,56097.6	9,56347.6	9,56596.4	9,56844.1
50	9,54578.0	9,54834.8	9,55090.5	9,55345.1	9,55598.4	9,55850.7	9,56101.8	9,56351.7	9,56600.5	9,56848.3
51	9,54582.2	9,54839.1	9,55094.8	9,55349.3	9,55602.7	9,55854.9	9,56105.9	9,56355.9	9,56604.7	9,56852.4
52	9,54586.5	9,54843.4	9,55099.0	9,55353.5	9,55606.9	9,55859.1	9,56110.1	9,56360.0	9,56608.9	9,56856.5
53	9,54590.8	9,54847.6	9,55103.3	9,55357.8	9,55611.1	9,55863.3	9,56114.3	9,56364.2	9,56613.0	9,56860.6
54	9,54595.1	9,54851.9	9,55107.5	9,55362.0	9,55615.3	9,55867.5	9,56118.5	9,56368.3	9,56617.1	9,56864.7
55	9,54599.4	9,54856.2	9,55111.8	9,55366.2	9,55619.5	9,55871.6	9,56122.6	9,56372.5	9,56621.2	9,56868.8
56	9,54603.7	9,54860.4	9,55116.0	9,55370.5	9,55623.7	9,55875.8	9,56126.8	9,56376.7	9,56625.4	9,56873.0
57	9,54608.0	9,54864.7	9,55120.3	9,55374.7	9,55627.9	9,55880.0	9,56131.0	9,56380.8	9,56629.5	9,56877.1
58	9,54612.3	9,54869.0	9,55124.5	9,55378.9	9,55632.1	9,55884.2	9,56135.2	9,56385.0	9,56633.6	9,56881.2
59	9,54616.6	9,54873.3	9,55128.8	9,55383.1	9,55636.4	9,55888.4	9,56139.3	9,56389.1	9,56637.8	9,56885.3
60	9,54620.8	9,54877.5	9,55133.0	9,55387.4	9,55640.6	9,55892.6	9,56143.5	9,56393.3	9,56641.9	9,56889.4

"	0'	1'	2'	3'	4'	5'	6'	7'	8'	9'
	4.1	4.1	4.1	4.1	4.0	4.0	4.0	4.0	4.0	3.9
0	9,56889.4	9,57135.8	9,57381.1	9,57625.3	9,57868.4	9,58110.4	9,58351.3	9,58591.1	9,58829.9	9,59067.0
1	9,56893.5	9,57139.9	9,57385.2	9,57629.4	9,57872.4	9,58114.4	9,58355.3	9,58595.1	9,58833.9	9,59071.6
2	9,56897.7	9,57144.0	9,57389.3	9,57633.4	9,57876.5	9,58118.4	9,58359.3	9,58599.1	9,58837.9	9,59075.5
3	9,56901.8	9,57148.1	9,57393.4	9,57637.5	9,57880.5	9,58122.5	9,58363.3	9,58603.1	9,58841.8	9,59079.5
4	9,56903.9	9,57152.2	9,57397.4	9,57641.5	9,57884.6	9,58126.5	9,58367.3	9,58607.1	9,58845.8	9,59083.4
5	9,56910.0	9,57156.3	9,57401.5	9,57645.6	9,57888.6	9,58130.5	9,58371.4	9,58611.1	9,58849.8	9,59087.4
6	9,56914.1	9,57160.4	9,57405.6	9,57649.7	9,57892.7	9,58134.5	9,58375.4	9,58615.1	9,58853.7	9,59091.3
7	9,56918.2	9,57164.5	9,57409.7	9,57653.7	9,57896.7	9,58138.6	9,58379.4	9,58619.1	9,58857.7	9,59095.3
8	9,56922.3	9,57168.6	9,57413.7	9,57657.8	9,57900.7	9,58142.6	9,58383.4	9,58623.0	9,58861.7	9,59099.2
9	9,56926.5	9,57172.7	9,57417.8	9,57661.8	9,57904.8	9,58146.6	9,58387.4	9,58627.0	9,58865.6	9,59103.2
10	9,56930.6	9,57176.8	9,57421.9	9,57665.9	9,57908.8	9,58150.6	9,58391.4	9,58631.0	9,58869.6	9,59107.1
11	9,56934.7	9,57180.9	9,57426.0	9,57670.0	9,57912.9	9,58154.6	9,58395.4	9,58635.0	9,58873.6	9,59111.1
12	9,56938.8	9,57185.0	9,57430.0	9,57674.0	9,57916.9	9,58158.7	9,58399.4	9,58639.0	9,58877.5	9,59115.0
13	9,56942.9	9,57189.1	9,57434.1	9,57678.1	9,57921.0	9,58162.7	9,58403.4	9,58643.0	9,58881.5	9,59119.0
14	9,56947.0	9,57193.2	9,57438.2	9,57682.1	9,57925.0	9,58166.7	9,58407.4	9,58647.0	9,58885.5	9,59122.9
15	9,56951.1	9,57197.3	9,57442.3	9,57686.2	9,57929.0	9,58170.7	9,58411.4	9,58651.0	9,58889.4	9,59126.9
16	9,56955.2	9,57201.3	9,57446.4	9,57690.2	9,57933.0	9,58174.7	9,58415.4	9,58654.9	9,58893.4	9,59130.8
17	9,56959.4	9,57205.4	9,57450.5	9,57694.3	9,57937.1	9,58178.8	9,58419.4	9,58658.9	9,58897.4	9,59134.8
18	9,56963.5	9,57209.5	9,57454.5	9,57698.4	9,57941.1	9,58182.8	9,58423.4	9,58662.9	9,58901.3	9,59138.7
19	9,56967.6	9,57213.6	9,57458.6	9,57702.4	9,57945.2	9,58186.8	9,58427.4	9,58666.9	9,58905.3	9,59142.7
20	9,56971.7	9,57217.7	9,57462.6	9,57706.5	9,57949.2	9,58190.8	9,58431.4	9,58670.9	9,58909.3	9,59146.6
21	9,56975.8	9,57221.8	9,57466.7	9,57710.5	9,57953.2	9,58194.8	9,58435.4	9,58674.8	9,58913.2	9,59150.6
22	9,56979.9	9,57225.9	9,57470.8	9,57714.6	9,57957.3	9,58198.9	9,58439.4	9,58678.8	9,58917.2	9,59154.5
23	9,56984.0	9,57230.0	9,57474.9	9,57718.6	9,57961.3	9,58202.9	9,58443.4	9,58682.8	9,58921.2	9,59158.5
24	9,56988.1	9,57234.1	9,57478.9	9,57722.7	9,57965.3	9,58206.9	9,58447.4	9,58686.8	9,58925.1	9,59162.4
25	9,56992.2	9,57238.2	9,57483.0	9,57726.7	9,57969.3	9,58210.9	9,58451.4	9,58690.8	9,58929.1	9,59166.4
26	9,56996.3	9,57242.3	9,57487.1	9,57730.8	9,57973.4	9,58214.9	9,58455.4	9,58694.8	9,58933.0	9,59170.3
27	9,57000.5	9,57246.4	9,57491.1	9,57734.8	9,57977.4	9,58219.0	9,58459.4	9,58698.7	9,58937.0	9,59174.2
28	9,57004.6	9,57250.4	9,57495.2	9,57738.9	9,57981.5	9,58223.0	9,58463.4	9,58702.7	9,58941.0	9,59178.2
29	9,57008.7	9,57254.5	9,57499.3	9,57742.9	9,57985.5	9,58227.0	9,58467.4	9,58706.7	9,58944.9	9,59182.1
30	9,57012.8	9,57258.6	9,57503.4	9,57747.0	9,57989.5	9,58231.0	9,58471.4	9,58710.7	9,58948.9	9,59186.1
31	9,57016.9	9,57262.7	9,57507.4	9,57751.0	9,57993.6	9,58235.0	9,58475.4	9,58714.7	9,58952.9	9,59190.0
32	9,57021.0	9,57266.8	9,57511.5	9,57755.1	9,57997.6	9,58239.0	9,58479.4	9,58718.6	9,58956.8	9,59193.9
33	9,57025.1	9,57270.9	9,57515.6	9,57759.1	9,58001.6	9,58243.0	9,58483.4	9,58722.6	9,58960.8	9,59197.9
34	9,57029.2	9,57275.0	9,57519.6	9,57763.2	9,58005.7	9,58247.1	9,58487.4	9,58726.6	9,58964.7	9,59201.8
35	9,57033.3	9,57279.1	9,57523.7	9,57767.2	9,58009.7	9,58251.1	9,58491.4	9,58730.6	9,58968.7	9,59205.8
36	9,57037.4	9,57283.1	9,57527.8	9,57771.3	9,58013.7	9,58255.1	9,58495.4	9,58734.5	9,58972.7	9,59209.7
37	9,57041.5	9,57287.2	9,57531.8	9,57775.3	9,58017.8	9,58259.1	9,58499.4	9,58738.5	9,58976.6	9,59213.7
38	9,57045.6	9,57291.3	9,57535.9	9,57779.4	9,58021.8	9,58263.1	9,58503.4	9,58742.5	9,58980.6	9,59217.6
39	9,57049.7	9,57295.4	9,57540.0	9,57783.4	9,58025.8	9,58267.1	9,58507.4	9,58746.5	9,58984.5	9,59221.6
40	9,57053.8	9,57299.5	9,57544.0	9,57787.5	9,58029.9	9,58271.1	9,58511.3	9,58750.4	9,58988.5	9,59225.5
41	9,57057.9	9,57303.6	9,57548.1	9,57791.5	9,58033.9	9,58275.1	9,58515.3	9,58754.4	9,58992.5	9,59229.4
42	9,57062.0	9,57307.6	9,57552.2	9,57795.6	9,58037.9	9,58279.2	9,58519.3	9,58758.4	9,58996.4	9,59233.4
43	9,57066.1	9,57311.7	9,57556.2	9,57799.6	9,58042.0	9,58283.2	9,58523.3	9,58762.4	9,59000.4	9,59237.3
44	9,57070.2	9,57315.8	9,57560.3	9,57803.7	9,58046.0	9,58287.2	9,58527.3	9,58766.3	9,59004.3	9,59241.2
45	9,57074.3	9,57319.9	9,57564.4	9,57807.7	9,58050.0	9,58291.2	9,58531.3	9,58770.3	9,59008.3	9,59245.2
46	9,57078.4	9,57324.0	9,57568.4	9,57811.8	9,58054.0	9,58295.2	9,58535.3	9,58774.3	9,59012.2	9,59249.1
47	9,57082.5	9,57328.1	9,57572.5	9,57815.8	9,58058.1	9,58299.2	9,58539.3	9,58778.3	9,59016.2	9,59253.1
48	9,57086.6	9,57332.1	9,57576.6	9,57819.9	9,58062.1	9,58303.2	9,58543.3	9,58782.2	9,59020.2	9,59257.0
49	9,57090.7	9,57336.2	9,57580.6	9,57823.9	9,58066.1	9,58307.2	9,58547.3	9,58786.2	9,59024.1	9,59260.9
50	9,57094.8	9,57340.3	9,57584.7	9,57828.0	9,58070.1	9,58311.2	9,58551.3	9,58790.2	9,59028.1	9,59264.9
51	9,57098.9	9,57344.4	9,57588.8	9,57832.0	9,58074.2	9,58315.3	9,58555.3	9,58794.2	9,59032.0	9,59268.8
52	9,57103.0	9,57348.5	9,57592.8	9,57836.0	9,58078.2	9,58319.3	9,58559.2	9,58798.1	9,59036.0	9,59272.8
53	9,57107.1	9,57352.6	9,57596.9	9,57840.1	9,58082.2	9,58323.3	9,58563.2	9,58802.1	9,59039.9	9,59276.7
54	9,57111.2	9,57356.6	9,57600.9	9,57844.1	9,58086.2	9,58327.3	9,58567.2	9,58806.1	9,59043.9	9,59280.6
55	9,57115.3	9,57360.7	9,57605.0	9,57848.2	9,58090.3	9,58331.3	9,58571.2	9,58810.1	9,59047.9	9,59284.6
56	9,57119.4	9,57364.8	9,57609.1	9,57852.2	9,58094.3	9,58335.3	9,58575.2	9,58814.0	9,59051.8	9,59288.5
57	9,57123.5	9,57368.9	9,57613.1	9,57856.3	9,58098.3	9,58339.3	9,58579.2	9,58818.0	9,59055.8	9,59292.4
58	9,57127.6	9,57373.0	9,57617.2	9,57860.3	9,58102.4	9,58343.3	9,58583.2	9,58822.0	9,59059.7	9,59296.3
59	9,57131.7	9,57377.0	9,57621.3	9,57864.4	9,58106.4	9,58347.3	9,58587.2	9,58826.0	9,59063.7	9,59300.3
60	9,57135.8	9,57381.1	9,57625.3	9,57868.4	9,58110.4	9,58351.3	9,58591.1	9,58829.9	9,59067.6	9,59304.2

Log. sin². $\frac{1}{2}$ t. 5¹.

"	10'	11'	12'	13'	14'	15'	16'	17'	18'	19'
	3.9	3.9	3.9	3.9	3.9	3.8	3.8	3.8	3.8	3.8
0	9,59304.2	9,59539.8	9,59774.4	9,60007.8	9,60240.3	9,60471.7	9,60702.1	9,60931.5	9,61159.8	9,61387.2
1	9,59308.2	9,59543.8	9,59778.3	9,60011.7	9,60244.2	9,60475.6	9,60705.9	9,60935.3	9,61163.6	9,61390.9
2	9,59312.1	9,59547.7	9,59782.2	9,60015.6	9,60248.0	9,60479.4	9,60709.8	9,60939.1	9,61167.4	9,61394.7
3	9,59316.1	9,59551.6	9,59786.1	9,60019.5	9,60251.9	9,60483.3	9,60713.6	9,60942.9	9,61171.2	9,61398.5
4	9,59320.0	9,59555.5	9,59790.0	9,60023.4	9,60255.8	9,60487.1	9,60717.4	9,60946.7	9,61175.0	9,61402.3
5	9,59323.9	9,59559.4	9,59793.9	9,60027.3	9,60259.6	9,60491.0	9,60721.3	9,60950.5	9,61178.8	9,61406.1
6	9,59327.9	9,59563.3	9,59797.8	9,60031.1	9,60263.5	9,60494.8	9,60725.1	9,60954.4	9,61182.6	9,61409.8
7	9,59331.8	9,59567.3	9,59801.7	9,60035.0	9,60267.4	9,60498.7	9,60728.9	9,60958.2	9,61186.4	9,61413.6
8	9,59335.7	9,59571.2	9,59805.6	9,60038.9	9,60271.2	9,60502.5	9,60732.7	9,60962.0	9,61190.2	9,61417.4
9	9,59339.7	9,59575.1	9,59809.5	9,60042.8	9,60275.0	9,60506.3	9,60736.6	9,60965.8	9,61194.0	9,61421.2
10	9,59343.6	9,59579.0	9,59813.3	9,60046.7	9,60278.9	9,60510.2	9,60740.4	9,60969.6	9,61197.8	9,61425.0
11	9,59347.5	9,59582.9	9,59817.2	9,60050.5	9,60282.8	9,60514.0	9,60744.2	9,60973.4	9,61201.6	9,61428.7
12	9,59351.4	9,59586.8	9,59821.1	9,60054.4	9,60286.7	9,60517.9	9,60748.1	9,60977.2	9,61205.4	9,61432.5
13	9,59355.4	9,59590.7	9,59825.0	9,60058.3	9,60290.5	9,60521.7	9,60751.9	9,60981.0	9,61209.2	9,61436.3
14	9,59359.3	9,59594.7	9,59828.9	9,60062.2	9,60294.4	9,60525.6	9,60755.7	9,60984.8	9,61213.0	9,61440.1
15	9,59363.3	9,59598.6	9,59832.8	9,60066.1	9,60298.3	9,60529.4	9,60759.5	9,60988.7	9,61216.8	9,61443.8
16	9,59367.2	9,59602.5	9,59836.7	9,60070.0	9,60302.1	9,60533.3	9,60763.4	9,60992.5	9,61220.5	9,61447.6
17	9,59371.1	9,59606.4	9,59840.6	9,60073.8	9,60306.0	9,60537.1	9,60767.2	9,60996.3	9,61224.3	9,61451.4
18	9,59375.0	9,59610.3	9,59844.5	9,60077.7	9,60309.8	9,60540.9	9,60771.0	9,61000.1	9,61228.1	9,61455.2
19	9,59379.0	9,59614.2	9,59848.4	9,60081.6	9,60313.7	9,60544.8	9,60774.9	9,61003.9	9,61231.9	9,61459.0
20	9,59382.9	9,59618.1	9,59852.3	9,60085.4	9,60317.6	9,60548.6	9,60778.7	9,61007.7	9,61235.7	9,61462.7
21	9,59386.8	9,59622.0	9,59856.2	9,60089.3	9,60321.4	9,60552.5	9,60782.5	9,61011.5	9,61239.5	9,61466.5
22	9,59390.8	9,59626.0	9,59860.1	9,60093.2	9,60325.3	9,60556.3	9,60786.3	9,61015.3	9,61243.3	9,61470.3
23	9,59394.7	9,59629.9	9,59864.0	9,60097.1	9,60329.1	9,60560.2	9,60790.2	9,61019.1	9,61247.1	9,61474.1
24	9,59398.6	9,59633.8	9,59867.9	9,60101.0	9,60333.0	9,60564.0	9,60794.0	9,61022.9	9,61250.9	9,61477.8
25	9,59402.5	9,59637.7	9,59871.8	9,60104.8	9,60336.9	9,60567.8	9,60797.8	9,61026.8	9,61254.7	9,61481.6
26	9,59406.5	9,59641.6	9,59875.7	9,60108.7	9,60340.7	9,60571.7	9,60801.6	9,61030.6	9,61258.5	9,61485.4
27	9,59410.4	9,59645.5	9,59879.6	9,60112.6	9,60344.6	9,60575.5	9,60805.5	9,61034.4	9,61262.2	9,61489.2
28	9,59414.3	9,59649.4	9,59883.5	9,60116.5	9,60348.4	9,60579.4	9,60809.3	9,61038.2	9,61266.0	9,61492.9
29	9,59418.3	9,59653.3	9,59887.4	9,60120.3	9,60352.3	9,60583.2	9,60813.1	9,61042.0	9,61269.8	9,61496.7
30	9,59422.2	9,59657.2	9,59891.2	9,60124.2	9,60356.1	9,60587.0	9,60816.9	9,61045.8	9,61273.6	9,61500.5
31	9,59426.1	9,59661.6	9,59895.1	9,60128.1	9,60360.0	9,60590.9	9,60820.7	9,61049.6	9,61277.4	9,61504.2
32	9,59430.0	9,59665.0	9,59899.0	9,60132.0	9,60363.8	9,60594.7	9,60824.6	9,61053.4	9,61281.2	9,61508.0
33	9,59434.0	9,59669.0	9,59902.9	9,60135.8	9,60367.7	9,60598.6	9,60828.4	9,61057.2	9,61285.0	9,61511.8
34	9,59437.9	9,59672.9	9,59906.8	9,60139.7	9,60371.6	9,60602.4	9,60832.2	9,61061.0	9,61288.8	9,61515.6
35	9,59441.8	9,59676.8	9,59910.7	9,60143.6	9,60375.4	9,60606.2	9,60836.0	9,61064.8	9,61292.6	9,61519.3
36	9,59445.7	9,59680.7	9,59914.6	9,60147.4	9,60379.3	9,60610.1	9,60839.8	9,61068.6	9,61296.3	9,61523.1
37	9,59449.7	9,59684.6	9,59918.5	9,60151.3	9,60383.1	9,60613.9	9,60843.7	9,61072.4	9,61300.1	9,61526.9
38	9,59453.6	9,59688.5	9,59922.4	9,60155.2	9,60387.0	9,60617.7	9,60847.5	9,61076.2	9,61303.9	9,61530.6
39	9,59457.5	9,59692.4	9,59926.3	9,60159.1	9,60390.9	9,60621.6	9,60851.3	9,61080.0	9,61307.7	9,61534.4
40	9,59461.4	9,59696.3	9,59930.1	9,60162.9	9,60394.8	9,60625.4	9,60855.1	9,61083.8	9,61311.5	9,61538.2
41	9,59465.3	9,59700.2	9,59934.0	9,60166.8	9,60398.6	9,60629.3	9,60859.0	9,61087.6	9,61315.3	9,61541.9
42	9,59469.3	9,59704.1	9,59937.9	9,60170.7	9,60402.4	9,60633.1	9,60862.8	9,61091.4	9,61319.1	9,61545.7
43	9,59473.2	9,59708.0	9,59941.8	9,60174.6	9,60406.3	9,60636.9	9,60866.6	9,61095.2	9,61322.9	9,61549.5
44	9,59477.1	9,59711.9	9,59945.7	9,60178.4	9,60410.1	9,60640.8	9,60870.4	9,61099.0	9,61326.6	9,61553.2
45	9,59481.0	9,59715.8	9,59949.6	9,60182.3	9,60414.0	9,60644.6	9,60874.2	9,61102.8	9,61330.4	9,61557.0
46	9,59485.0	9,59719.7	9,59953.5	9,60186.2	9,60417.8	9,60648.4	9,60878.1	9,61106.6	9,61334.2	9,61560.8
47	9,59488.9	9,59723.6	9,59957.4	9,60190.0	9,60421.7	9,60652.3	9,60881.9	9,61110.4	9,61338.0	9,61564.6
48	9,59492.8	9,59727.5	9,59961.2	9,60193.9	9,60425.5	9,60656.1	9,60885.7	9,61114.2	9,61341.8	9,61568.3
49	9,59496.7	9,59731.4	9,59965.1	9,60197.8	9,60429.4	9,60659.9	9,60889.5	9,61118.0	9,61345.6	9,61572.1
50	9,59500.6	9,59735.3	9,59969.0	9,60201.6	9,60433.2	9,60663.8	9,60893.3	9,61121.8	9,61349.3	9,61575.9
51	9,59504.6	9,59739.3	9,59972.9	9,60205.5	9,60437.0	9,60667.6	9,60897.1	9,61125.6	9,61353.1	9,61579.6
52	9,59508.5	9,59743.2	9,59976.8	9,60209.4	9,60440.9	9,60671.4	9,60900.9	9,61129.4	9,61356.9	9,61583.4
53	9,59512.4	9,59747.1	9,59980.7	9,60213.2	9,60444.8	9,60675.3	9,60904.8	9,61133.2	9,61360.7	9,61587.2
54	9,59516.3	9,59751.0	9,59984.6	9,60217.1	9,60448.6	9,60679.1	9,60908.6	9,61137.0	9,61364.5	9,61590.9
55	9,59520.2	9,59754.9	9,59988.4	9,60221.0	9,60452.5	9,60683.0	9,60912.4	9,61140.8	9,61368.3	9,61594.7
56	9,59524.2	9,59758.8	9,59992.3	9,60224.8	9,60456.3	9,60686.8	9,60916.2	9,61144.6	9,61372.0	9,61598.4
57	9,59528.1	9,59762.7	9,59996.2	9,60228.7	9,60460.2	9,60690.6	9,60920.0	9,61148.4	9,61375.8	9,61602.2
58	9,59532.0	9,59766.6	9,60000.1	9,60232.6	9,60464.0	9,60694.4	9,60923.8	9,61152.2	9,61379.6	9,61606.0
59	9,59535.9	9,59770.5	9,60004.0	9,60236.4	9,60467.9	9,60698.3	9,60927.7	9,61156.0	9,61383.4	9,61609.7
60	9,59539.8	9,59774.4	9,60007.8	9,60240.3	9,60471.7	9,60702.1	9,60931.5	9,61159.8	9,61387.2	9,61613.5

"	20'	21'	22'	23'	24'	25'	26'	27'	28'	29'
	3.8	3.7	3.7	3.7	3.7	3.7	3.7	3.6	3.6	3.6
0	9,61613.5	9,61838.8	9,62063.2	9,62286.5	9,62508.9	9,62730.3	9,62950.7	9,63170.1	9,63388.6	9,63606.7
1	9,61617.3	9,61842.6	9,62066.9	9,62290.2	9,62512.6	9,62733.9	9,62954.3	9,63173.8	9,63392.2	9,63609.0
2	9,61621.0	9,61846.3	9,62070.6	9,62294.0	9,62516.3	9,62737.6	9,62958.0	9,63177.4	9,63395.9	9,63613.3
3	9,61624.8	9,61850.1	9,62074.4	9,62297.7	9,62520.0	9,62741.3	9,62961.7	9,63181.1	9,63399.5	9,63617.6
4	9,61628.6	9,61853.8	9,62078.1	9,62301.4	9,62523.7	9,62745.0	9,62965.3	9,63184.7	9,63403.1	9,63620.9
5	9,61632.3	9,61857.6	9,62081.8	9,62305.1	9,62527.4	9,62748.7	9,62969.0	9,63188.4	9,63406.8	9,63624.3
6	9,61636.1	9,61861.3	9,62085.6	9,62308.8	9,62531.1	9,62752.4	9,62972.7	9,63192.0	9,63410.4	9,63627.8
7	9,61639.8	9,61865.0	9,62089.3	9,62312.5	9,62534.8	9,62756.0	9,62976.3	9,63195.7	9,63414.0	9,63631.4
8	9,61643.6	9,61868.8	9,62093.0	9,62316.2	9,62538.5	9,62759.7	9,62980.0	9,63199.3	9,63417.6	9,63635.0
9	9,61647.4	9,61872.6	9,62096.7	9,62320.0	9,62542.2	9,62763.4	9,62983.7	9,63203.0	9,63421.3	9,63638.6
10	9,61651.1	9,61876.3	9,62100.5	9,62323.7	9,62545.9	9,62767.1	9,62987.3	9,63206.6	9,63424.9	9,63642.3
11	9,61654.9	9,61880.0	9,62104.2	9,62327.4	9,62549.6	9,62770.8	9,62991.0	9,63210.2	9,63428.5	9,63645.9
12	9,61658.7	9,61883.8	9,62107.9	9,62331.1	9,62553.2	9,62774.4	9,62994.6	9,63213.9	9,63432.2	9,63649.5
13	9,61662.4	9,61887.5	9,62111.7	9,62334.8	9,62556.9	9,62778.1	9,62998.3	9,63217.5	9,63435.8	9,63653.1
14	9,61666.2	9,61891.3	9,62115.4	9,62338.5	9,62560.6	9,62781.8	9,63002.0	9,63221.2	9,63439.4	9,63656.7
15	9,61669.9	9,61895.0	9,62119.1	9,62342.2	9,62564.3	9,62785.5	9,63005.6	9,63224.8	9,63443.0	9,63660.3
16	9,61673.7	9,61898.8	9,62122.8	9,62345.9	9,62568.0	9,62789.1	9,63009.3	9,63228.5	9,63446.7	9,63663.9
17	9,61677.5	9,61902.5	9,62126.5	9,62349.6	9,62571.7	9,62792.8	9,63012.9	9,63232.1	9,63450.3	9,63667.6
18	9,61681.2	9,61906.2	9,62130.3	9,62353.3	9,62575.4	9,62796.5	9,63016.6	9,63235.7	9,63453.9	9,63671.2
19	9,61685.0	9,61910.0	9,62134.0	9,62357.0	9,62579.1	9,62800.2	9,63020.3	9,63239.4	9,63457.6	9,63674.8
20	9,61688.7	9,61913.7	9,62137.7	9,62360.8	9,62582.8	9,62803.8	9,63023.9	9,63243.0	9,63461.2	9,63678.4
21	9,61692.5	9,61917.5	9,62141.5	9,62364.5	9,62586.5	9,62807.5	9,63027.6	9,63246.7	9,63464.8	9,63682.0
22	9,61696.2	9,61921.2	9,62145.2	9,62368.2	9,62590.2	9,62811.2	9,63031.2	9,63250.3	9,63468.5	9,63685.6
23	9,61700.0	9,61924.9	9,62148.9	9,62371.9	9,62593.9	9,62814.8	9,63034.9	9,63254.0	9,63472.1	9,63689.2
24	9,61703.8	9,61928.7	9,62152.6	9,62375.6	9,62597.6	9,62818.5	9,63038.6	9,63257.6	9,63475.7	9,63692.8
25	9,61707.5	9,61932.4	9,62156.4	9,62379.3	9,62601.3	9,62822.2	9,63042.2	9,63261.3	9,63479.3	9,63696.5
26	9,61711.3	9,61936.2	9,62160.1	9,62383.0	9,62604.9	9,62825.9	9,63045.9	9,63264.9	9,63483.0	9,63700.1
27	9,61715.0	9,61939.9	9,62163.8	9,62386.7	9,62608.6	9,62829.6	9,63049.5	9,63268.5	9,63486.6	9,63703.7
28	9,61718.8	9,61943.6	9,62167.5	9,62390.4	9,62612.3	9,62833.2	9,63053.2	9,63272.2	9,63490.2	9,63707.3
29	9,61722.5	9,61947.4	9,62171.3	9,62394.1	9,62616.0	9,62836.8	9,63056.9	9,63275.8	9,63493.8	9,63710.9
30	9,61726.3	9,61951.1	9,62175.0	9,62397.8	9,62619.7	9,62840.5	9,63060.5	9,63279.5	9,63497.5	9,63714.5
31	9,61730.1	9,61954.9	9,62178.7	9,62401.5	9,62623.4	9,62844.2	9,63064.2	9,63283.1	9,63501.1	9,63718.1
32	9,61733.8	9,61958.6	9,62182.4	9,62405.2	9,62627.1	9,62847.9	9,63067.8	9,63286.7	9,63504.7	9,63721.7
33	9,61737.6	9,61962.3	9,62186.1	9,62409.0	9,62630.8	9,62851.6	9,63071.5	9,63290.4	9,63508.3	9,63725.3
34	9,61741.3	9,61966.1	9,62189.9	9,62412.7	9,62634.5	9,62855.3	9,63075.1	9,63294.0	9,63512.0	9,63728.9
35	9,61745.1	9,61969.8	9,62193.6	9,62416.4	9,62638.2	9,62859.0	9,63078.8	9,63297.7	9,63515.6	9,63732.5
36	9,61748.8	9,61973.6	9,62197.3	9,62420.1	9,62641.8	9,62862.6	9,63082.5	9,63301.3	9,63519.2	9,63736.1
37	9,61752.6	9,61977.3	9,62201.0	9,62423.8	9,62645.5	9,62866.3	9,63086.1	9,63305.0	9,63522.8	9,63739.8
38	9,61756.3	9,61981.0	9,62204.7	9,62427.5	9,62649.2	9,62870.0	9,63089.8	9,63308.6	9,63526.5	9,63743.4
39	9,61760.1	9,61984.8	9,62208.5	9,62431.2	9,62652.9	9,62873.7	9,63093.4	9,63312.2	9,63530.1	9,63747.0
40	9,61763.8	9,61988.5	9,62212.2	9,62434.9	9,62656.6	9,62877.3	9,63097.1	9,63315.9	9,63533.7	9,63750.6
41	9,61767.6	9,61992.2	9,62215.9	9,62438.6	9,62660.3	9,62881.0	9,63100.7	9,63319.5	9,63537.3	9,63754.2
42	9,61771.3	9,61996.0	9,62219.6	9,62442.3	9,62664.0	9,62884.7	9,63104.4	9,63323.1	9,63540.9	9,63757.8
43	9,61775.1	9,61999.7	9,62223.3	9,62446.0	9,62667.6	9,62888.3	9,63108.0	9,63326.8	9,63544.5	9,63761.4
44	9,61778.8	9,62003.4	9,62227.1	9,62449.7	9,62671.3	9,62892.0	9,63111.7	9,63330.4	9,63548.2	9,63765.0
45	9,61782.6	9,62007.2	9,62230.8	9,62453.3	9,62675.0	9,62895.7	9,63115.3	9,63334.1	9,63551.8	9,63768.6
46	9,61786.3	9,62010.9	9,62234.5	9,62457.1	9,62678.7	9,62899.3	9,63119.0	9,63337.7	9,63555.4	9,63772.2
47	9,61790.1	9,62014.7	9,62238.2	9,62460.8	9,62682.4	9,62903.0	9,63122.7	9,63341.3	9,63559.1	9,63775.8
48	9,61793.8	9,62018.4	9,62241.9	9,62464.5	9,62686.1	9,62906.7	9,63126.3	9,63345.0	9,63562.7	9,63779.4
49	9,61797.6	9,62022.1	9,62245.6	9,62468.2	9,62689.8	9,62910.4	9,63130.0	9,63348.6	9,63566.3	9,63783.0
50	9,61801.3	9,62025.9	9,62249.4	9,62471.9	9,62693.4	9,62914.0	9,63133.6	9,63352.2	9,63569.9	9,63786.6
51	9,61805.1	9,62029.6	9,62253.1	9,62475.6	9,62697.1	9,62917.7	9,63137.2	9,63355.9	9,63573.5	9,63790.2
52	9,61808.8	9,62033.3	9,62256.8	9,62479.3	9,62700.8	9,62921.3	9,63140.9	9,63359.5	9,63577.1	9,63793.8
53	9,61812.6	9,62037.1	9,62260.5	9,62483.0	9,62704.5	9,62925.0	9,63144.6	9,63363.1	9,63580.8	9,63797.4
54	9,61816.3	9,62040.8	9,62264.2	9,62486.7	9,62708.2	9,62928.7	9,63148.2	9,63366.8	9,63584.4	9,63801.0
55	9,61820.1	9,62044.5	9,62268.0	9,62490.4	9,62711.9	9,62932.4	9,63151.9	9,63370.4	9,63588.0	9,63804.6
56	9,61823.8	9,62048.2	9,62271.7	9,62494.1	9,62715.5	9,62936.0	9,63155.5	9,63374.0	9,63591.6	9,63808.1
57	9,61827.6	9,62052.0	9,62275.4	9,62497.8	9,62719.2	9,62939.7	9,63159.2	9,63377.7	9,63595.2	9,63811.8
58	9,61831.3	9,62055.7	9,62279.1	9,62501.5	9,62722.9	9,62943.3	9,63162.8	9,63381.3	9,63598.9	9,63815.4
59	9,61835.1	9,62059.5	9,62282.8	9,62505.2	9,62726.6	9,62947.0	9,63166.5	9,63385.0	9,63602.5	9,63819.0
60	9,61838.8	9,62063.2	9,62286.5	9,62508.9	9,62730.3	9,62950.7	9,63170.1	9,63388.6	9,63606.1	9,63822.7

Log. Sin²¹/₂ t. 5⁴.

n	30'	31'	32'	33'	34'	35'	36'	37'	38'	39'
	3.6	3.6	3.6	3.5	3.5	3.5	3.5	3.5	3.5	3.5
0	9,63822.7	9,64038.3	9,64252.9	9,64466.6	9,64679.4	9,64891.3	9,65102.2	9,65312.2	9,65521.3	9,65729.4
1	9,63826.3	9,64041.9	9,64256.5	9,64470.2	9,64683.0	9,64894.8	9,65105.7	9,65315.7	9,65524.7	9,65732.9
2	9,63829.9	9,64045.4	9,64260.1	9,64473.7	9,64686.5	9,64898.3	9,65109.2	9,65319.2	9,65528.2	9,65736.3
3	9,63833.5	9,64049.0	9,64263.6	9,64477.3	9,64690.0	9,64901.8	9,65112.7	9,65322.7	9,65531.7	9,65739.8
4	9,63837.1	9,64052.6	9,64267.2	9,64480.8	9,64693.6	9,64905.3	9,65116.2	9,65326.1	9,65535.2	9,65743.3
5	9,63840.7	9,64056.2	9,64270.8	9,64484.4	9,64697.1	9,64908.9	9,65119.7	9,65329.6	9,65538.6	9,65746.7
6	9,63844.3	9,64059.8	9,64274.3	9,64488.0	9,64700.6	9,64912.4	9,65123.2	9,65333.1	9,65542.1	9,65750.2
7	9,63847.9	9,64063.4	9,64277.9	9,64491.6	9,64704.2	9,64915.9	9,65126.7	9,65336.6	9,65545.6	9,65753.6
8	9,63851.5	9,64066.9	9,64281.5	9,64495.2	9,64707.7	9,64919.4	9,65130.2	9,65340.1	9,65549.1	9,65757.1
9	9,63855.1	9,64070.5	9,64285.0	9,64498.7	9,64711.3	9,64923.0	9,65133.8	9,65343.6	9,65552.5	9,65760.6
10	9,63858.7	9,64074.1	9,64288.6	9,64502.2	9,64714.8	9,64926.5	9,65137.3	9,65347.1	9,65556.0	9,65764.0
11	9,63862.3	9,64077.7	9,64292.2	9,64505.7	9,64718.3	9,64930.0	9,65140.8	9,65350.6	9,65559.5	9,65767.5
12	9,63865.8	9,64081.3	9,64295.7	9,64509.3	9,64721.9	9,64933.5	9,65144.3	9,65354.1	9,65563.0	9,65770.9
13	9,63869.4	9,64084.9	9,64299.3	9,64512.8	9,64725.4	9,64937.0	9,65147.8	9,65357.6	9,65566.4	9,65774.4
14	9,63873.0	9,64088.4	9,64302.9	9,64516.4	9,64728.9	9,64940.6	9,65151.3	9,65361.0	9,65569.9	9,65777.9
15	9,63876.6	9,64092.0	9,64306.4	9,64519.9	9,64732.5	9,64944.1	9,65154.8	9,65364.5	9,65573.4	9,65781.3
16	9,63880.2	9,64095.6	9,64310.0	9,64523.5	9,64736.0	9,64947.6	9,65158.3	9,65368.0	9,65576.9	9,65784.8
17	9,63883.8	9,64099.2	9,64313.6	9,64527.0	9,64739.5	9,64951.1	9,65161.8	9,65371.5	9,65580.3	9,65788.2
18	9,63887.4	9,64102.8	9,64317.1	9,64530.6	9,64743.1	9,64954.6	9,65165.3	9,65375.0	9,65583.8	9,65791.7
19	9,63891.0	9,64106.3	9,64320.7	9,64534.1	9,64746.6	9,64958.2	9,65168.8	9,65378.5	9,65587.3	9,65795.2
20	9,63894.6	9,64119.9	9,64324.3	9,64537.7	9,64750.1	9,64961.7	9,65172.3	9,65382.0	9,65590.7	9,65798.6
21	9,63898.2	9,64113.5	9,64327.8	9,64541.2	9,64753.7	9,64965.2	9,65175.8	9,65385.5	9,65594.2	9,65802.1
22	9,63901.8	9,64117.1	9,64331.4	9,64544.8	9,64757.2	9,64968.7	9,65179.3	9,65388.9	9,65597.7	9,65805.5
23	9,63905.4	9,64120.7	9,64335.0	9,64548.3	9,64760.8	9,64972.2	9,65182.8	9,65392.4	9,65601.2	9,65809.0
24	9,63909.0	9,64124.2	9,64338.5	9,64551.9	9,64764.3	9,64975.7	9,65186.3	9,65395.9	9,65604.6	9,65812.4
25	9,63912.6	9,64127.8	9,64342.1	9,64555.4	9,64767.8	9,64979.2	9,65189.8	9,65399.4	9,65608.0	9,65815.9
26	9,63916.2	9,64131.4	9,64345.6	9,64559.0	9,64771.3	9,64982.8	9,65193.3	9,65402.9	9,65611.5	9,65819.3
27	9,63919.8	9,64135.0	9,64349.2	9,64562.5	9,64774.9	9,64986.3	9,65196.8	9,65406.4	9,65615.0	9,65822.8
28	9,63923.4	9,64138.5	9,64352.8	9,64566.0	9,64778.4	9,64989.8	9,65200.3	9,65409.9	9,65618.5	9,65826.2
29	9,63927.0	9,64142.2	9,64356.3	9,64569.6	9,64781.9	9,64993.3	9,65203.8	9,65413.4	9,65622.0	9,65829.7
30	9,63930.6	9,64145.7	9,64359.9	9,64573.1	9,64785.4	9,64996.8	9,65207.3	9,65416.8	9,65625.5	9,65833.2
31	9,63934.2	9,64149.3	9,64363.5	9,64576.7	9,64789.0	9,65000.4	9,65210.8	9,65420.3	9,65629.0	9,65836.6
32	9,63937.8	9,64152.9	9,64367.0	9,64580.2	9,64792.5	9,65003.9	9,65214.3	9,65423.8	9,65632.4	9,65840.1
33	9,63941.4	9,64156.4	9,64370.6	9,64583.8	9,64796.1	9,65007.4	9,65217.8	9,65427.3	9,65635.9	9,65843.5
34	9,63944.9	9,64160.0	9,64374.1	9,64587.3	9,64799.6	9,65010.9	9,65221.3	9,65430.8	9,65639.3	9,65847.0
35	9,63948.5	9,64163.6	9,64377.7	9,64590.9	9,64803.1	9,65014.4	9,65224.8	9,65434.3	9,65642.8	9,65850.4
36	9,63952.1	9,64167.2	9,64381.3	9,64594.4	9,64806.6	9,65017.9	9,65228.3	9,65437.7	9,65646.3	9,65853.9
37	9,63955.7	9,64170.7	9,64384.8	9,64598.0	9,64810.2	9,65021.4	9,65231.8	9,65441.2	9,65649.7	9,65857.3
38	9,63959.3	9,64174.3	9,64388.4	9,64601.5	9,64813.7	9,65025.0	9,65235.3	9,65444.7	9,65653.2	9,65860.8
39	9,63962.9	9,64177.9	9,64391.9	9,64605.0	9,64817.2	9,65028.5	9,65238.8	9,65448.2	9,65656.7	9,65864.2
40	9,63966.5	9,64181.5	9,64395.5	9,64608.6	9,64820.7	9,65032.0	9,65242.3	9,65451.7	9,65660.1	9,65867.7
41	9,63970.1	9,64185.0	9,64399.1	9,64612.1	9,64824.3	9,65035.5	9,65245.8	9,65455.1	9,65663.6	9,65871.1
42	9,63973.7	9,64188.6	9,64402.6	9,64615.7	9,64827.8	9,65039.0	9,65249.3	9,65458.6	9,65667.1	9,65874.6
43	9,63977.3	9,64192.2	9,64406.2	9,64619.2	9,64831.3	9,65042.5	9,65252.8	9,65462.1	9,65670.5	9,65878.0
44	9,63980.9	9,64195.8	9,64409.7	9,64622.8	9,64834.9	9,65046.0	9,65256.3	9,65465.6	9,65674.0	9,65881.5
45	9,63984.5	9,64199.3	9,64413.3	9,64626.4	9,64838.4	9,65049.5	9,65259.8	9,65469.0	9,65677.5	9,65885.0
46	9,63988.0	9,64202.9	9,64416.9	9,64629.8	9,64841.9	9,65053.0	9,65263.3	9,65472.5	9,65680.9	9,65888.4
47	9,63991.6	9,64206.5	9,64420.4	9,64633.4	9,64845.4	9,65056.6	9,65266.8	9,65476.0	9,65684.4	9,65891.9
48	9,63995.2	9,64210.1	9,64424.0	9,64636.9	9,64849.0	9,65060.1	9,65270.2	9,65479.5	9,65687.9	9,65895.3
49	9,63998.8	9,64213.6	9,64427.5	9,64640.5	9,64852.5	9,65063.6	9,65273.7	9,65483.0	9,65691.3	9,65898.8
50	9,64002.4	9,64217.2	9,64431.1	9,64644.0	9,64856.0	9,65067.1	9,65277.2	9,65486.5	9,65694.8	9,65902.2
51	9,64006.0	9,64220.8	9,64434.6	9,64647.6	9,64859.5	9,65070.6	9,65280.7	9,65490.0	9,65698.3	9,65905.6
52	9,64009.6	9,64224.3	9,64438.2	9,64651.1	9,64863.1	9,65074.1	9,65284.2	9,65493.4	9,65701.7	9,65909.1
53	9,64013.2	9,64227.9	9,64441.8	9,64654.6	9,64866.6	9,65077.6	9,65287.7	9,65496.9	9,65705.2	9,65912.5
54	9,64016.7	9,64231.5	9,64445.3	9,64658.2	9,64870.1	9,65081.1	9,65291.2	9,65500.4	9,65708.6	9,65916.0
55	9,64020.3	9,64235.1	9,64448.9	9,64661.7	9,64873.6	9,65084.6	9,65294.7	9,65503.9	9,65712.1	9,65919.4
56	9,64023.9	9,64238.6	9,64452.4	9,64665.3	9,64877.2	9,65088.1	9,65298.2	9,65507.3	9,65715.6	9,65922.9
57	9,64027.5	9,64242.2	9,64456.0	9,64668.8	9,64880.7	9,65091.7	9,65301.7	9,65510.8	9,65719.0	9,65926.3
58	9,64031.1	9,64245.8	9,64459.5	9,64672.3	9,64884.2	9,65095.2	9,65305.2	9,65514.3	9,65722.5	9,65929.8
59	9,64034.7	9,64249.4	9,64463.1	9,64675.9	9,64887.7	9,65098.7	9,65308.7	9,65517.8	9,65726.0	9,65933.2
60	9,64038.3	9,64252.9	9,64466.6	9,64679.4	9,64891.3	9,65102.2	9,65312.2	9,65521.3	9,65729.4	9,65936.7

n	40'	41'	42'	43'	44'	45'	46'	47'	48'	49'
	3.4	3.4	3.4	3.4	3.4	3.4	3.4	3.3	3.3	3.3
0	9,65936.7	9,66143.0	9,66348.5	9,66553.0	9,66756.7	9,66959.4	9,67161.3	9,67362.3	9,67562.4	9,67761.7
1	9,65940.1	9,66146.5	9,66351.9	9,66556.4	9,66760.1	9,66962.8	9,67164.7	9,67365.7	9,67565.8	9,67765.0
2	9,65943.6	9,66149.9	9,66355.3	9,66559.8	9,66763.4	9,66966.2	9,67168.0	9,67369.0	9,67569.1	9,67768.3
3	9,65947.0	9,66153.3	9,66358.7	9,66563.2	9,66766.8	9,66969.6	9,67171.4	9,67372.3	9,67572.4	9,67771.6
4	9,65950.5	9,66156.7	9,66362.1	9,66566.6	9,66770.2	9,66972.9	9,67174.7	9,67375.7	9,67575.8	9,67774.9
5	9,65953.9	9,66160.2	9,66365.5	9,66570.0	9,66773.6	9,66976.3	9,67178.1	9,67379.0	9,67579.1	9,67778.3
6	9,65957.3	9,66163.6	9,66369.0	9,66573.4	9,66777.0	9,66979.7	9,67181.5	9,67382.4	9,67582.4	9,67781.6
7	9,65960.8	9,66167.0	9,66372.4	9,66576.8	9,66780.4	9,66983.0	9,67184.8	9,67385.7	9,67585.7	9,67784.9
8	9,65964.2	9,66170.5	9,66375.8	9,66580.2	9,66783.8	9,66986.4	9,67188.2	9,67389.0	9,67589.1	9,67788.2
9	9,65967.7	9,66173.9	9,66379.2	9,66583.6	9,66787.1	9,66989.8	9,67191.5	9,67392.4	9,67592.4	9,67791.5
10	9,65971.1	9,66177.3	9,66382.6	9,66587.0	9,66790.5	9,66993.1	9,67194.9	9,67395.7	9,67595.7	9,67794.8
11	9,65974.6	9,66180.8	9,66386.0	9,66590.4	9,66793.9	9,66996.5	9,67198.2	9,67399.1	9,67599.0	9,67798.1
12	9,65978.0	9,66184.2	9,66389.4	9,66593.8	9,66797.3	9,66999.9	9,67201.6	9,67402.4	9,67602.4	9,67801.4
13	9,65981.5	9,66187.6	9,66392.7	9,66597.2	9,66800.7	9,67003.3	9,67204.9	9,67405.8	9,67605.7	9,67804.8
14	9,65984.9	9,66191.0	9,66396.3	9,66600.6	9,66804.1	9,67006.6	9,67208.3	9,67409.1	9,67609.0	9,67808.1
15	9,65988.3	9,66194.5	9,66399.7	9,66604.0	9,66807.4	9,67010.0	9,67211.7	9,67412.4	9,67612.3	9,67811.4
16	9,65991.8	9,66198.0	9,66403.1	9,66607.4	9,66810.8	9,67013.4	9,67215.0	9,67415.8	9,67615.7	9,67814.7
17	9,65995.3	9,66201.4	9,66406.5	9,66610.8	9,66814.2	9,67016.7	9,67218.4	9,67419.1	9,67619.0	9,67818.0
18	9,65998.7	9,66204.7	9,66409.9	9,66614.2	9,66817.6	9,67020.1	9,67221.7	9,67422.5	9,67622.3	9,67821.3
19	9,66002.1	9,66208.2	9,66413.3	9,66617.6	9,66820.9	9,67023.5	9,67225.1	9,67425.8	9,67625.6	9,67824.6
20	9,66005.5	9,66211.6	9,66416.7	9,66621.0	9,66824.3	9,67026.8	9,67228.4	9,67429.1	9,67629.0	9,67827.9
21	9,66009.0	9,66215.0	9,66420.2	9,66624.4	9,66817.7	9,67030.2	9,67231.8	9,67432.5	9,67632.3	9,67831.2
22	9,66012.4	9,66218.4	9,66423.6	9,66627.8	9,66831.1	9,67033.6	9,67235.1	9,67435.8	9,67635.6	9,67834.5
23	9,66015.9	9,66221.8	9,66427.0	9,66631.2	9,66834.5	9,67036.9	9,67238.5	9,67439.1	9,67638.9	9,67837.9
24	9,66019.3	9,66225.3	9,66430.4	9,66634.6	9,66837.9	9,67040.3	9,67241.8	9,67442.5	9,67642.2	9,67841.2
25	9,66022.8	9,66228.7	9,66433.8	9,66638.0	9,66841.3	9,67043.7	9,67245.2	9,67445.8	9,67645.6	9,67844.5
26	9,66026.2	9,66232.2	9,66437.2	9,66641.4	9,66844.6	9,67047.0	9,67248.5	9,67449.1	9,67648.9	9,67847.8
27	9,66029.6	9,66235.6	9,66440.6	9,66644.8	9,66848.0	9,67050.4	9,67251.9	9,67452.5	9,67652.2	9,67851.1
28	9,66033.1	9,66239.0	9,66444.0	9,66648.2	9,66851.4	9,67053.8	9,67255.2	9,67455.8	9,67655.5	9,67854.4
29	9,66036.5	9,66242.5	9,66447.4	9,66651.6	9,66854.7	9,67057.1	9,67258.6	9,67459.2	9,67658.9	9,67857.7
30	9,66040.0	9,66245.9	9,66450.9	9,66655.0	9,66858.1	9,67060.5	9,67261.9	9,67462.5	9,67662.2	9,67861.0
31	9,66043.4	9,66249.3	9,66454.3	9,66658.4	9,66861.5	9,67063.9	9,67265.3	9,67465.8	9,67665.5	9,67864.3
32	9,66046.8	9,66252.7	9,66457.6	9,66661.7	9,66864.9	9,67067.2	9,67268.6	9,67469.2	9,67668.8	9,67867.6
33	9,66050.3	9,66256.1	9,66461.1	9,66665.1	9,66868.3	9,67070.6	9,67272.0	9,67472.5	9,67672.1	9,67870.9
34	9,66053.7	9,66259.5	9,66464.5	9,66668.5	9,66871.7	9,67073.9	9,67275.3	9,67475.8	9,67675.5	9,67874.2
35	9,66057.2	9,66263.0	9,66467.9	9,66671.9	9,66875.1	9,67077.3	9,67278.7	9,67479.2	9,67678.8	9,67877.5
36	9,66060.6	9,66266.4	9,66471.3	9,66675.3	9,66878.4	9,67080.7	9,67282.0	9,67482.5	9,67682.1	9,67880.8
37	9,66064.0	9,66269.8	9,66474.7	9,66678.7	9,66881.8	9,67084.0	9,67285.4	9,67485.8	9,67685.4	9,67884.1
38	9,66067.5	9,66273.2	9,66478.1	9,66682.1	9,66885.2	9,67087.4	9,67288.7	9,67489.2	9,67688.7	9,67887.4
39	9,66070.9	9,66276.7	9,66481.5	9,66685.5	9,66888.6	9,67090.8	9,67292.1	9,67492.5	9,67692.1	9,67890.7
40	9,66074.3	9,66280.1	9,66484.9	9,66688.9	9,66891.9	9,67094.1	9,67295.4	9,67495.8	9,67695.4	9,67894.0
41	9,66077.8	9,66283.5	9,66488.3	9,66692.3	9,66895.3	9,67097.5	9,67298.8	9,67499.2	9,67698.7	9,67897.4
42	9,66081.2	9,66286.9	9,66491.7	9,66695.7	9,66898.7	9,67100.8	9,67302.1	9,67502.5	9,67702.0	9,67900.7
43	9,66084.7	9,66290.3	9,66495.2	9,66699.1	9,66902.1	9,67104.2	9,67305.5	9,67505.8	9,67705.3	9,67904.0
44	9,66088.1	9,66293.8	9,66498.6	9,66702.4	9,66905.4	9,67107.6	9,67308.8	9,67509.2	9,67708.6	9,67907.3
45	9,66091.5	9,66297.2	9,66502.0	9,66705.8	9,66908.8	9,67110.9	9,67312.2	9,67512.5	9,67712.0	9,67910.6
46	9,66095.0	9,66300.6	9,66505.4	9,66709.2	9,66912.2	9,67114.3	9,67315.5	9,67515.8	9,67715.3	9,67913.9
47	9,66098.4	9,66304.0	9,66508.8	9,66712.6	9,66915.6	9,67117.6	9,67318.8	9,67519.2	9,67718.6	9,67917.2
48	9,66101.8	9,66307.4	9,66512.2	9,66716.0	9,66919.0	9,67121.0	9,67322.2	9,67522.5	9,67721.9	9,67920.5
49	9,66105.3	9,66310.9	9,66515.6	9,66719.4	9,66922.3	9,67124.4	9,67325.5	9,67525.8	9,67725.2	9,67923.8
50	9,66108.7	9,66314.3	9,66519.0	9,66722.8	9,66925.7	9,67127.7	9,67328.9	9,67529.1	9,67728.6	9,67927.1
51	9,66112.1	9,66317.7	9,66522.4	9,66726.2	9,66929.1	9,67131.1	9,67332.2	9,67532.5	9,67731.9	9,67930.4
52	9,66115.6	9,66321.1	9,66525.8	9,66729.6	9,66932.4	9,67134.4	9,67335.6	9,67535.8	9,67735.2	9,67933.7
53	9,66119.0	9,66324.5	9,66529.2	9,66733.0	9,66935.8	9,67137.8	9,67338.9	9,67539.1	9,67738.5	9,67937.0
54	9,66122.4	9,66328.0	9,66532.6	9,66736.3	9,66939.2	9,67141.2	9,67342.3	9,67542.5	9,67741.8	9,67940.3
55	9,66125.9	9,66331.4	9,66536.0	9,66739.7	9,66942.6	9,67144.5	9,67345.6	9,67545.8	9,67745.1	9,67943.6
56	9,66129.3	9,66334.8	9,66539.4	9,66743.1	9,66945.9	9,67147.9	9,67348.9	9,67549.1	9,67748.4	9,67946.9
57	9,66132.7	9,66338.2	9,66542.8	9,66746.5	9,66949.3	9,67151.2	9,67352.3	9,67552.5	9,67751.7	9,67950.2
58	9,66136.2	9,66341.6	9,66546.2	9,66749.9	9,66952.7	9,67154.6	9,67355.6	9,67555.8	9,67755.1	9,67953.5
59	9,66139.6	9,66345.0	9,66549.6	9,66753.3	9,66956.1	9,67158.0	9,67359.0	9,67559.1	9,67758.4	9,67956.8
60	9,66143.0	9,66348.5	9,66553.0	9,66756.7	9,66959.4	9,67161.3	9,67362.3	9,67562.4	9,67761.7	9,67960.1

Log. Sin². $\frac{1}{2}$ t. δ° .

"	50'	51'	52'	53	54'	55'	56'	57'	58'	59'
	3.3	3.3	3.3	3.2	3.2	3.2	3.2	3.2	3.2	3.2
0	9,67960.1	9,68157.6	9,68354.3	9,68550.1	9,68745.0	9,68939.1	9,69132.4	9,69324.8	9,69516.3	9,69707.1
1	9,67963.4	9,68160.9	9,68357.6	9,68553.3	9,68748.3	9,68942.3	9,69135.6	9,69328.0	9,69519.5	9,69710.2
2	9,67966.7	9,68164.2	9,68360.8	9,68556.6	9,68751.5	9,68945.5	9,69138.8	9,69331.2	9,69522.7	9,69713.4
3	9,67970.0	9,68167.5	9,68364.1	9,68559.8	9,68754.7	9,68948.8	9,69142.0	9,69334.4	9,69525.9	9,69716.6
4	9,67973.3	9,68170.7	9,68367.3	9,68563.1	9,68758.0	9,68952.0	9,69145.2	9,69337.6	9,69529.1	9,69719.8
5	9,67976.6	9,68174.0	9,68370.6	9,68566.3	9,68761.2	9,68955.3	9,69148.4	9,69340.8	9,69532.3	9,69723.0
6	9,67979.9	9,68177.3	9,68373.9	9,68569.6	9,68764.5	9,68958.5	9,69151.6	9,69344.0	9,69535.5	9,69726.1
7	9,67983.2	9,68180.6	9,68377.1	9,68572.9	9,68767.7	9,68961.7	9,69154.9	9,69347.2	9,69538.6	9,69729.3
8	9,67986.5	9,68183.9	9,68380.4	9,68576.1	9,68770.9	9,68964.9	9,69158.1	9,69350.4	9,69541.8	9,69732.5
9	9,67989.7	9,68187.2	9,68383.7	9,68579.4	9,68774.2	9,68968.2	9,69161.3	9,69353.6	9,69545.0	9,69735.6
10	9,67993.0	9,68190.4	9,68386.9	9,68582.6	9,68777.4	9,68971.4	9,69164.5	9,69356.8	9,69548.2	9,69738.8
11	9,67996.3	9,68193.7	9,68390.2	9,68585.9	9,68780.7	9,68974.6	9,69167.7	9,69360.0	9,69551.4	9,69742.0
12	9,67999.6	9,68197.0	9,68393.5	9,68589.1	9,68783.9	9,68977.8	9,69170.9	9,69363.2	9,69554.6	9,69745.1
13	9,68002.9	9,68200.3	9,68396.8	9,68592.4	9,68787.1	9,68981.1	9,69174.1	9,69366.4	9,69557.8	9,69748.3
14	9,68006.2	9,68203.6	9,68400.0	9,68595.6	9,68790.4	9,68984.3	9,69177.3	9,69369.6	9,69560.9	9,69751.5
15	9,68009.5	9,68206.8	9,68403.3	9,68598.9	9,68793.6	9,68987.5	9,69180.5	9,69372.8	9,69564.1	9,69754.7
16	9,68012.8	9,68210.1	9,68406.6	9,68602.1	9,68796.8	9,68990.7	9,69183.8	9,69375.9	9,69567.3	9,69757.8
17	9,68016.1	9,68213.4	9,68409.8	9,68605.4	9,68800.1	9,68994.0	9,69187.0	9,69379.1	9,69570.5	9,69761.0
18	9,68019.4	9,68216.7	9,68413.1	9,68608.6	9,68803.3	9,68997.2	9,69190.2	9,69382.3	9,69573.7	9,69764.2
19	9,68022.7	9,68220.0	9,68416.4	9,68611.9	9,68806.6	9,69000.4	9,69193.4	9,69385.5	9,69576.8	9,69767.3
20	9,68026.0	9,68223.2	9,68419.6	9,68615.1	9,68809.8	9,69003.6	9,69196.6	9,69388.7	9,69580.0	9,69770.5
21	9,68029.3	9,68226.5	9,68422.9	9,68618.4	9,68813.0	9,69006.9	9,69199.8	9,69391.9	9,69583.2	9,69773.7
22	9,68032.6	9,68229.8	9,68426.2	9,68621.6	9,68816.3	9,69010.1	9,69203.0	9,69395.1	9,69586.4	9,69776.8
23	9,68035.9	9,68233.1	9,68429.4	9,68624.9	9,68819.5	9,69013.3	9,69206.2	9,69398.3	9,69589.6	9,69780.0
24	9,68039.2	9,68236.4	9,68432.7	9,68628.1	9,68822.7	9,69016.5	9,69209.4	9,69401.5	9,69592.7	9,69783.2
25	9,68042.5	9,68239.6	9,68439.0	9,68631.4	9,68826.0	9,69019.7	9,69212.6	9,69404.7	9,69595.9	9,69786.3
26	9,68045.8	9,68242.9	9,68439.2	9,68634.6	9,68829.2	9,69022.9	9,69215.8	9,69407.9	9,69599.1	9,69789.5
27	9,68049.1	9,68246.2	9,68442.5	9,68637.9	9,68832.5	9,69026.2	9,69219.1	9,69411.1	9,69602.3	9,69792.7
28	9,68052.4	9,68249.5	9,68445.7	9,68641.1	9,68835.7	9,69029.4	9,69222.3	9,69414.3	9,69605.5	9,69795.8
29	9,68055.7	9,68252.8	9,68449.0	9,68644.4	9,68838.9	9,69032.6	9,69225.5	9,69417.5	9,69608.6	9,69799.0
30	9,68058.9	9,68256.0	9,68452.3	9,68647.6	9,68842.1	9,69035.8	9,69228.7	9,69420.7	9,69611.8	9,69802.2
31	9,68062.2	9,68259.3	9,68455.5	9,68650.9	9,68845.4	9,69039.1	9,69231.9	9,69423.9	9,69615.0	9,69805.3
32	9,68065.5	9,68262.6	9,68458.8	9,68654.1	9,68848.6	9,69042.3	9,69235.1	9,69427.1	9,69618.2	9,69808.5
33	9,68068.8	9,68265.9	9,68462.1	9,68657.4	9,68851.9	9,69045.5	9,69238.3	9,69430.3	9,69621.4	9,69811.7
34	9,68072.1	9,68269.1	9,68465.3	9,68660.6	9,68855.1	9,69048.7	9,69241.5	9,69433.4	9,69624.5	9,69814.8
35	9,68075.4	9,68272.4	9,68468.6	9,68663.9	9,68858.3	9,69051.9	9,69244.7	9,69436.6	9,69627.7	9,69818.0
36	9,68078.7	9,68275.7	9,68471.8	9,68667.1	9,68861.6	9,69055.2	9,69247.9	9,69439.8	9,69630.9	9,69821.1
37	9,68082.0	9,68279.0	9,68475.1	9,68670.4	9,68864.8	9,69058.4	9,69251.1	9,69443.0	9,69634.1	9,69824.3
38	9,68085.3	9,68282.2	9,68478.4	9,68673.6	9,68868.0	9,69061.6	9,69254.3	9,69446.2	9,69637.2	9,69827.5
39	9,68088.6	9,68285.5	9,68481.6	9,68676.9	9,68871.3	9,69064.8	9,69257.5	9,69449.4	9,69640.4	9,69830.6
40	9,68091.9	9,68288.8	9,68484.9	9,68680.1	9,68874.5	9,69068.0	9,69260.7	9,69452.6	9,69643.6	9,69833.8
41	9,68095.2	9,68292.1	9,68488.2	9,68683.4	9,68877.7	9,69071.3	9,69263.9	9,69455.8	9,69646.8	9,69837.0
42	9,68098.4	9,68295.4	9,68491.4	9,68686.6	9,68881.0	9,69074.5	9,69267.1	9,69459.0	9,69650.0	9,69840.1
43	9,68101.7	9,68298.6	9,68494.7	9,68689.9	9,68884.2	9,69077.7	9,69270.3	9,69462.2	9,69653.1	9,69843.3
44	9,68105.0	9,68301.9	9,68497.9	9,68693.1	9,68887.4	9,69080.9	9,69273.5	9,69465.3	9,69656.3	9,69846.4
45	9,68108.3	9,68305.2	9,68501.2	9,68696.4	9,68890.7	9,69084.1	9,69276.8	9,69468.5	9,69659.5	9,69849.6
46	9,68111.6	9,68308.4	9,68504.5	9,68699.6	9,68893.9	9,69087.3	9,69280.0	9,69471.7	9,69662.7	9,69852.8
47	9,68114.9	9,68311.7	9,68507.8	9,68702.8	9,68897.1	9,69090.5	9,69283.2	9,69474.9	9,69665.8	9,69855.9
48	9,68118.2	9,68315.0	9,68511.0	9,68706.1	9,68900.4	9,69093.8	9,69286.4	9,69478.1	9,69669.0	9,69859.1
49	9,68121.5	9,68318.3	9,68514.2	9,68709.3	9,68903.6	9,69097.0	9,69289.6	9,69481.3	9,69672.2	9,69862.2
50	9,68124.7	9,68321.6	9,68517.5	9,68712.6	9,68906.8	9,69100.2	9,69292.8	9,69484.5	9,69675.4	9,69865.4
51	9,68128.0	9,68324.8	9,68520.7	9,68715.8	9,68910.1	9,69103.4	9,69296.0	9,69487.7	9,69678.5	9,69868.6
52	9,68131.3	9,68328.1	9,68524.0	9,68719.1	9,68913.3	9,69106.6	9,69299.2	9,69490.9	9,69681.7	9,69871.7
53	9,68134.6	9,68331.4	9,68527.3	9,68722.3	9,68916.5	9,69109.9	9,69302.4	9,69494.1	9,69684.9	9,69874.9
54	9,68137.9	9,68334.6	9,68530.5	9,68725.6	9,68919.7	9,69113.1	9,69305.6	9,69497.2	9,69688.1	9,69878.1
55	9,68141.2	9,68337.9	9,68533.8	9,68728.8	9,68923.0	9,69116.3	9,69308.8	9,69500.4	9,69691.2	9,69881.2
56	9,68144.5	9,68341.2	9,68537.0	9,68732.0	9,68926.2	9,69119.5	9,69312.0	9,69503.6	9,69694.4	9,69884.4
57	9,68147.8	9,68344.5	9,68540.3	9,68735.3	9,68929.4	9,69122.7	9,69315.2	9,69506.8	9,69697.6	9,69887.5
58	9,68151.0	9,68347.7	9,68543.6	9,68738.5	9,68932.7	9,69125.9	9,69318.4	9,69510.0	9,69700.7	9,69890.7
59	9,68154.3	9,68351.0	9,68546.8	9,68741.8	9,68935.9	9,69129.2	9,69321.6	9,69513.2	9,69703.9	9,69893.8
60	9,68157.6	9,68354.3	9,68550.1	9,68745.0	9,68939.1	9,69132.4	9,69324.8	9,69516.3	9,69707.1	9,69897.0

Для сысканія Рефракціи Г. Спирувъ, Часть 1.

Аргументиръ : Разстояніе отъ зенита = Z.

Z	α	A	γ	Z	α	A	γ
0. 0	1,75968	1,0000	1,0000	64. 0	1,75751		1,0063
5. 0	1,75967			65. 0	1,75731		1,0068
10. 0	1,75966			66. 0	1,75708		1,0075
11. 0	1,75966			67. 0	1,75683		1,0083
12. 0	1,75965			68. 0	1,75654		1,0092
13. 0	1,75965			69. 0	1,75620		1,0101
14. 0	1,75964			70. 0	1,75583		1,0111
15. 0	1,75964			71. 0	1,75538		1,0124
16. 0	1,75963			72. 0	1,75488		1,0139
17. 0	1,75963			73. 0	1,75427		1,0156
18. 0	1,75962			74. 0	1,75355		1,0175
19. 0	1,75962			75. 0	1,75369		1,0197
20. 0	1,75961			75. 20	1,75237		1,0204
21. 0	1,75960			75. 40	1,75203		1,0212
22. 0	1,75960			76. 0	1,75167		1,0220
23. 0	1,75959			76. 20	1,75128		1,0230
24. 0	1,75958			76. 40	1,75087		1,0241
25. 0	1,75957			77. 0	1,75041	1,0026	1,0252
26. 0	1,75956			77. 20	1,74992	1,0027	1,0264
27. 0	1,75955			77. 40	1,74940	1,0028	1,0281
28. 0	1,75954			78. 0	1,74884	1,0030	1,0299
29. 0	1,75952			78. 20	1,74825	1,0031	1,0318
30. 0	1,75950			78. 40	1,74759	1,0033	1,0338
31. 0	1,75949			79. 0	1,74688	1,0035	1,0357
32. 0	1,75948			79. 20	1,74611	1,0037	1,0377
33. 0	1,75947			79. 40	1,74526	1,0039	1,0398
34. 0	1,75945			80. 0	1,74435	1,0041	1,0420
35. 0	1,75943			80. 10	1,74385	1,0042	1,0431
36. 0	1,75941			80. 20	1,74333	1,0043	1,0442
37. 0	1,75939			80. 30	1,74280	1,0045	1,0454
38. 0	1,75937			80. 40	1,74224	1,0046	1,0466
39. 0	1,75935			80. 50	1,74164	1,0047	1,0479
40. 0	1,75933			81. 0	1,74100	1,0049	1,0493
41. 0	1,75930			81. 10	1,74035	1,0050	1,0508
42. 0	1,75927			81. 20	1,73967	1,0052	1,0523
43. 0	1,75924			81. 30	1,73895	1,0054	1,0540
44. 0	1,75920			81. 40	1,73819	1,0056	1,0559
45. 0	1,75915		1,0018	81. 50	1,73740	1,0058	1,0579
46. 0	1,75911		1,0019	82. 0	1,73657	1,0060	1,0600
47. 0	1,75907		1,0019	82. 10	1,73569	1,0062	1,0622
48. 0	1,75903		1,0020	82. 20	1,73475	1,0065	1,0646
49. 0	1,75898		1,0021	82. 30	1,73376	1,0067	1,0671
50. 0	1,75893		1,0023	82. 40	1,73271	1,0070	1,0697
51. 0	1,75888		1,0025	82. 50	1,73160	1,0073	1,0725
52. 0	1,75883		1,0026	83. 0	1,73042	1,0075	1,0754
53. 0	1,75877		1,0027	83. 10	1,72918	1,0078	1,0784
54. 0	1,75870		1,0029	83. 20	1,72786	1,0081	1,0815
55. 0	1,75862		1,0032	83. 30	1,72644	1,0084	1,0846
56. 0	1,75853		1,0034	83. 40	1,72493	1,0088	1,0879
57. 0	1,75844		1,0037	83. 50	1,72331	1,0092	1,0914
58. 0	1,75835		1,0040	84. 0	1,72158	1,0096	1,0951
59. 0	1,75824		1,0043	84. 10	1,71972	1,0100	1,0992
60. 0	1,75812		1,0046	84. 20	1,71773	1,0105	1,1036
61. 0	1,75800		1,0049	84. 30	1,71561	1,0110	1,1082
62. 0	1,75785		1,0054	84. 40	1,71334	1,0115	1,1130
63. 0	1,75769		1,0058	84. 50	1,71091	1,0121	1,1178
64. 0	1,75751		1,0063	85. 0	1,70832	1,0127	1,1229

Аргументъ : высота Барометра = в париж. линіи

в	β	в	β	в	β	в	β	в	β	в	β
312,0	-2796	318,0	-1968	324,0	-1156	330,0	-360	336,0	+423	342,0	+1192
1	2782	1	1954	1	1143	1	347	1	436	1	1205
2	2768	2	1941	2	1129	2	334	2	449	2	1217
3	2754	3	1927	3	1116	3	320	3	462	3	1230
4	2740	4	1914	4	1103	4	307	4	475	4	1242
5	2727	5	1900	5	1089	5	294	5	488	5	1255
6	2713	6	1886	6	1076	6	281	6	500	6	1268
7	2699	7	1873	7	1063	7	268	7	513	7	1280
8	2685	8	1859	8	1050	8	254	8	526	8	1293
9	2671	9	1846	9	1036	9	241	9	539	9	1305
313,0	-2657	319,0	-1832	325,0	-1023	331,0	-228	337,0	+552	343,0	+1318
1	2643	1	1818	1	1010	1	215	1	565	1	1331
2	2629	2	1805	2	996	2	202	2	578	2	1343
3	2615	3	1791	3	983	3	189	3	591	3	1356
4	2601	4	1778	4	969	4	176	4	604	4	1369
5	2588	5	1764	5	956	5	163	5	617	5	1382
6	2574	6	1750	6	943	6	149	6	629	6	1394
7	2560	7	1737	7	929	7	136	7	642	7	1407
8	2546	8	1723	8	916	8	123	8	655	8	1420
9	2532	9	1710	9	902	9	110	9	668	9	1432
313,0	-2518	320,0	-1696	326,0	-889	332,0	-97	338,0	+681	344,0	+1445
1	2504	1	1682	1	876	1	84	1	694	1	1458
2	2490	2	1669	2	862	2	71	2	707	2	1470
3	2477	3	1655	3	849	3	58	3	719	3	1483
4	2463	4	1642	4	836	4	45	4	732	4	1495
5	2449	5	1628	5	823	5	32	5	745	5	1508
6	2435	6	1614	6	809	6	19	6	758	6	1521
7	2421	7	1601	7	796	7	-6	7	771	7	1533
8	2408	8	1587	8	783	8	+7	8	783	8	1546
9	2394	9	1574	9	769	9	20	9	796	9	1558
315,0	-2380	321,0	-1560	327,0	-756	333,0	+33	339,0	+809	345,0	+1571
1	2366	1	1546	1	743	1	46	1	822	1	1584
2	2352	2	1533	2	730	2	59	2	835	2	1596
3	2339	3	1519	3	716	3	72	3	847	3	1609
4	2325	4	1506	4	703	4	85	4	860	4	1621
5	2311	5	1493	5	690	5	98	5	873	5	1634
6	2297	6	1479	6	677	6	112	6	886	6	1647
7	2283	7	1465	7	664	7	125	7	899	7	1659
8	2270	8	1452	8	650	8	138	8	911	8	1672
9	2256	9	1438	9	637	9	151	9	924	9	1684
316,0	-2242	322,0	-1425	328,0	-624	334,0	+164	340,0	+937	346,0	+1697
1	2228	1	1412	1	611	1	177	1	950	1	1710
2	2215	2	1398	2	597	2	190	2	962	2	1722
3	2201	3	1385	3	584	3	203	3	975	3	1735
4	2187	4	1371	4	571	4	216	4	988	4	1747
5	2174	5	1358	5	558	5	228	5	1001	5	1760
6	2160	6	1345	6	544	6	241	6	1013	6	1772
7	2146	7	1331	7	531	7	254	7	1026	7	1785
8	2132	8	1318	8	518	8	267	8	1039	8	1797
9	2119	9	1304	9	504	9	280	9	1051	9	1810
317,0	-2105	323,0	-1291	329,0	-491	335,0	+293	341,0	+1064	347,0	+1822
1	2091	1	1277	1	478	1	306	1	1077	1	1835
2	2078	2	1264	2	465	2	319	2	1090	2	1847
3	2064	3	1250	3	452	3	332	3	1102	3	1860
4	2050	4	1237	4	439	4	345	4	1115	4	1872
5	2037	5	1224	5	426	5	358	5	1128	5	1885
6	2023	6	1210	6	412	6	371	6	1141	6	1897
7	2009	7	1196	7	399	7	384	7	1154	7	1910
8	1995	8	1183	8	386	8	397	8	1166	8	1922
9	1982	9	1169	9	373	9	410	9	1179	9	1935
318,0	-1968	324,0	-1156	330,0	-360	336,0	423	342,0	+1192	348,0	+1947

Аргументы: Температура воздуха по Реомюрову Термометру = t .

t	γ	t	γ	t	γ	t	γ	t	γ	t	γ
-32,0	+8595	-26,0	+7172	-20,0	+5795	-14,0	+4461	-8,0	+3166	-2,0	+1909
-31,9	8571	-25,9	7149	-19,9	5773	-13,9	4439	-7,9	3145	-1,9	1888
8	8547	8	7126	8	5750	8	4417	8	3124	8	1868
7	8523	7	7102	7	5728	7	4395	7	3102	7	1847
6	8499	6	7079	6	5705	6	4373	6	3081	6	1827
5	8475	5	7056	5	5683	5	4352	5	3060	5	1806
4	8450	4	7033	4	5660	4	4330	4	3039	4	1785
3	8426	3	7010	3	5638	3	4308	3	3018	3	1765
2	8402	2	6986	2	5615	2	4386	2	2996	2	1744
1	8378	1	6963	1	5593	1	4264	1	2975	1	1724
-31,0	+8354	-25,0	+6940	-19,0	+5570	-13,0	+4242	-7,0	+2954	-1,0	+1703
-30,9	+8330	-24,9	+6917	-18,9	+5548	-12,9	+4220	-6,9	+2933	-0,9	+1682
8	8306	8	6894	8	5525	8	4199	8	2912	8	1662
7	8282	7	6871	7	5503	7	4177	7	2891	7	1641
6	8258	6	6848	6	5480	6	4155	6	2870	6	1621
5	8235	5	6825	5	5458	5	2134	5	2849	5	1600
4	8211	4	6801	4	5436	4	4112	4	2827	4	1579
3	8187	3	6778	3	5413	3	4090	3	2806	3	1559
2	8163	2	6755	2	5391	2	4068	2	2785	2	1538
1	8139	1	6732	1	5368	1	4047	1	2764	-0,1	1518
-30,0	+8115	-24,0	+6709	-18,0	+5346	-12,0	+4025	-6,0	+2743	0	+1497
-29,9	+8091	-23,9	+6686	-17,9	+5324	-11,9	+4003	-5,9	+2722		
8	8067	8	6663	8	5301	8	3982	8	2701		
7	8044	7	6640	7	5279	7	3960	7	2680		
6	8020	6	6617	6	5257	6	3938	6	2659		
5	7996	5	6594	5	5235	5	3917	5	2638		
4	7972	4	6571	4	5212	4	3895	4	2617		
3	7948	3	6548	3	5190	3	3873	3	2596		
2	7925	2	6525	2	5168	2	3851	2	2575		
1	7901	1	6502	1	5145	1	3830	1	2554		
29,0	+7877	-23,0	+6479	-17,0	+5123	-11,0	+3808	-5,0	+2533		
-28,9	+7853	-22,9	+6456	-16,9	+5101	-10,9	+3787	-4,9	+2512		
8	7830	8	6433	8	5079	8	3765	8	2491		
7	7806	7	6410	7	5056	7	3744	7	2470		
6	7783	6	6387	6	5034	6	3722	6	2449		
5	7759	5	6365	5	5012	5	3701	5	2429		
4	7735	4	6342	4	4990	4	3679	4	2408		
3	7712	3	6319	3	4968	3	3658	3	2387		
2	7688	2	6296	2	4945	2	3636	2	2366		
1	7665	1	6273	1	4923	1	3615	1	2345		
-28,0	+7641	-22,0	+6250	-16,0	+4901	-10,0	+3593	-4,0	+2324		
-27,9	+7618	-21,9	+6227	-15,9	+4879	-9,9	+3572	-3,9	+2303		
8	7594	8	6204	8	4857	8	3550	8	2282		
7	7571	7	6182	7	4835	7	3529	7	2261		
6	7547	6	6159	6	4813	6	3507	6	2240		
5	7524	5	6136	5	4791	5	3486	5	2220		
4	7500	4	6113	4	4768	4	3465	4	2199		
3	7477	3	6090	3	4746	3	3443	3	2178		
2	7453	2	6068	2	4724	2	3422	2	2157		
1	7430	1	6045	1	4702	1	3400	1	2136		
-27,0	+7406	-21,0	+6022	-15,0	+4680	-9,0	+3379	-3,0	+2115		
-26,9	+7383	-20,9	+5999	-14,9	+4658	-8,9	+3358	-2,9	+2094		
8	7359	8	5977	8	4636	8	3336	8	2074		
7	7336	7	5954	7	4614	7	3315	7	2053		
6	7312	6	5931	6	4592	6	3294	6	2033		
5	7289	5	5909	5	4571	5	3273	5	2012		
4	7266	4	5889	4	4549	4	3251	4	1991		
3	7242	3	5863	3	4527	3	3230	3	1971		
2	7219	2	5840	2	4505	2	3209	2	1950		
1	7195	1	5818	1	4483	1	3187	1	1930		
-26,0	+7172	-20,0	+5795	-14,0	+4461	-8,0	+3166	-2,0	+1909		

Аргументъ: температура воздуха по Реомюрову термометру = t .

t	γ	t	γ	t	γ	t	γ	t	γ	t	γ
0,0	+1497	+6,0	+286	+12,0	-891	+18,0	-2038	+24,0	-3155	+30,0	-4245
+0,1	1477	1	266	1	910	1	2057	1	3173	1	4263
2	1456	2	246	2	930	2	2076	2	3192	2	4281
3	1436	3	227	3	949	3	2094	3	3210	3	4298
4	1415	4	207	4	969	4	2113	4	3228	4	4316
5	1395	5	187	5	988	5	2132	5	3246	5	4334
6	1375	6	167	6	1007	6	2151	6	3265	6	4352
7	1354	7	147	7	1027	7	2170	7	3283	7	4370
8	1334	8	128	8	1046	8	2188	8	3301	8	4387
+0,9	+1313	+6,9	+108	+12,9	-1066	+18,9	-2207	+24,9	-3320	+30,9	-4405
+1,0	+1293	+7,0	+88	+13,0	-1085	+19,0	-2226	+25,0	-3338	+31,0	-4423
1	1273	1	68	1	1104	1	2245	1	3356	1	4441
2	1252	2	48	2	1123	2	2264	2	3375	2	4459
3	1232	3	29	3	1143	3	2282	3	3393	3	4477
4	1212	4	9	4	1162	4	2301	4	3411	4	4495
5	1192	5	-11	5	1181	5	2320	5	3429	5	4513
6	1171	6	-31	6	1200	6	2339	6	3448	6	4530
7	1151	7	-51	7	1219	7	2358	7	3466	7	4548
8	1131	8	-70	8	1239	8	2376	8	3484	8	4566
+1,9	+1110	+7,9	-90	+13,9	-1258	+19,9	-2395	+25,9	-3503	+31,9	-4584
+2,0	+1090	+8,0	-110	+14,0	-1277	+20,0	-2414	+26,0	-3521	+32,0	-4602
1	1070	1	130	1	1296	1	2433	1	3539		
2	1050	2	149	2	1315	2	2451	2	3557		
3	1029	3	169	3	1334	3	2470	3	3576		
4	1009	4	188	4	1353	4	2488	4	3594		
5	989	5	208	5	1372	5	2507	5	3612		
6	969	6	228	6	1392	6	2526	6	3630		
7	949	7	247	7	1411	7	2544	7	3648		
8	928	8	267	8	1430	8	2563	8	3667		
+2,9	+908	+8,9	-286	+14,9	-1449	+20,9	-2581	+26,9	-3685		
+3,0	+888	+9,0	-306	+15,0	-1468	+21,0	-2600	+27,0	-3703		
1	868	1	326	1	1487	1	2619	1	3721		
2	848	2	345	2	1506	2	2637	2	3739		
3	827	3	365	3	1525	3	2656	3	3758		
4	807	4	384	4	1544	4	2674	4	3776		
5	787	5	404	5	1563	5	2693	5	3794		
6	767	6	424	6	1583	6	2712	6	3812		
7	747	7	443	7	1602	7	2730	7	3830		
8	726	8	463	8	1621	8	2749	8	3849		
+3,9	+706	+9,9	-482	+15,9	-1640	+21,9	-2767	+27,9	-3867		
+4,0	+686	+10,0	-502	+16,0	-1659	+22,0	-2786	+28,0	-3885		
1	666	1	521	1	1678	1	2804	1	3903		
2	646	2	541	2	1697	2	2823	2	3921		
3	626	3	560	3	1716	3	2841	3	3939		
4	606	4	580	4	1735	4	2860	4	3957		
5	586	5	599	5	1754	5	2878	5	3975		
6	566	6	619	6	1773	6	2897	6	3993		
7	546	7	638	7	1792	7	2915	7	4011		
8	526	8	658	8	1811	8	2934	8	4029		
+4,9	-506	+10,9	-677	+16,9	-1830	+22,9	-2952	+28,9	-4047		
+5,0	-486	+11,0	-697	+17,0	-1849	+23,0	-2971	+29,0	-4065		
1	466	1	716	1	1868	1	2989	1	4083		
2	446	2	736	2	1887	2	3008	2	4101		
3	426	3	755	3	1906	3	3026	3	4119		
4	406	4	775	4	1925	4	3045	4	4137		
5	386	5	794	5	1943	5	3063	5	4155		
6	366	6	813	6	1962	6	3081	6	4173		
7	346	7	833	7	1981	7	3100	7	4191		
8	326	8	852	8	2000	8	3118	8	4209		
+5,9	306	+11,9	872	+17,9	2019	+23,9	3137	+29,9	4227		
+6,0	+286	+12,0	-891	+18,0	-2038	+24,0	-3155	+30,0	-4245		

ТАБЛИЦА XI.

Рефракція близь горизонту.

Z	Сред. реф. = ζ	Log. ζ	A	λ	Z	Сред. реф. = ζ	Log. ζ	A	λ
85. 0	584,6	2,76687	1,0127	1,1229	87. 0	854,6	2,93174	1,0244	1,2215
10	602,1	2,77967	1,0133	1,1283	10	887,7	2,94827	1,0261	1,2341
20	620,5	2,79274	1,0140	1,1342	20	923,2	2,96530	1,0278	1,2477
30	639,6	2,80590	1,0147	1,1408	30	960,9	2,98269	1,0298	1,2624
40	658,6	2,81862	1,0155	1,1478	40	1000,4	3,00017	1,0318	1,2783
50	678,3	2,83142	1,0163	1,1549	50	1042,9	3,01824	1,0342	1,2955
86. 0	698,9	2,84444	1,0172	1,1624	88. 0	1088,6	3,03686	1,0368	1,3141
10	720,5	2,85763	1,0182	1,1706	10	1138,0	3,05614	1,0397	1,3342
20	743,7	2,87140	1,0192	1,1794	20	1192,1	3,07631	1,0429	1,3560
30	768,3	2,88555	1,0204	1,1888	30	1250,9	3,09723	1,0465	1,3797
40	795,0	2,90037	1,0216	1,1989	40	1315,7	3,11916	1,0504	1,4057
50	823,8	2,91582	1,0230	1,2098	50	1386,9	3,14205	1,0546	1,4341
87. 0	854,6	2,93174	1,0244	1,2215	89. 0	1464,6	3,16572	1,0593	1,4653

ТАБЛИЦА XII.

Для приведенія рефракціи Г. Спирувъ въ рефракціи Г. Бесселя
Аргументъ температура воздуха по Реомюру термометра = t .

t	-32	-28	-24	-20	-16	-12	-8	-4	0	+4	+8	+12	+16	+20	+24	+28	+32
η	-0,42	-0,33	-0,25	-0,17	-0,10	-0,03	+0,03	+0,11	+0,17	+0,23	+0,29	+0,35	+0,40	+0,46	+0,51	+0,56	+0,61

ТАБЛИЦА XIII.

Для вычисления высотъ горъ измѣренныхъ барометромъ.

Таблица 1 аргументъ: суммы температура воздуха по Реомюрову терм. = $\tau + \tau'$						Таблица 2 аргум: широта мѣста = ϕ .						Таблица 3. аргум: v	
$\tau + \tau'$	A	$\tau + \tau'$	A	$\tau + \tau'$	A	ϕ	поправ	ϕ	ϕ	поправ	ϕ	v	+
-16	4,24662	+6	4,27087	+28	4,29385	0	+124	-90	23	+86	-67	1,9	1.
15	4,24775	7	4,27195	29	4,29487	1	123	89	24	88	66	2,0	1.
14	4,24888	8	4,27301	30	4,29588	2	123	88	25	79	65	2,1	1.
13	4,25000	9	4,27408	31	4,29689	3	123	87	26	76	64	2,2	1.
12	4,25113	10	4,27514	32	4,29790	4	122	86	27	73	63	2,3	1.
11	4,25225	11	4,27620	33	4,29891	5	122	85	28	69	62	2,4	2.
10	4,25337	12	4,27726	34	4,29991	6	121	84	29	65	61	2,5	2.
9	4,25448	13	4,27832	35	4,30092	7	120	83	30	62	60	2,6	3.
8	4,25560	14	4,27937	36	4,30192	8	119	82	31	58	59	2,7	3.
7	4,25671	15	4,28042	37	4,30291	9	118	81	32	54	58	2,8	4.
6	4,25781	16	4,28147	38	4,30391	10	116	80	33	50	57	2,9	5.
5	4,25892	17	4,28251	39	4,30490	11	115	79	34	46	56	3,0	7.
4	4,26002	18	4,28356	40	4,30589	12	113	78	35	42	55	3,1	9.
3	4,26111	19	4,28460	41	4,30688	13	111	77	36	38	54	3,2	11.
2	4,26220	20	4,28564	42	4,30787	14	109	76	37	34	53	3,3	14.
-1	4,26330	21	4,28667	43	4,30885	15	107	75	38	30	52	3,4	17.
0	4,26439	22	4,28770	44	4,30984	16	105	74	39	26	51	3,5	22.
+1	4,26548	23	4,28874	45	4,31082	17	102	73	40	21	50	3,6	27.
2	4,26657	24	4,28976	46	4,31179	18	100	72	41	17	49	3,7	34.
3	4,26765	25	4,29079	47	4,31277	19	97	71	42	13	48		
4	4,26872	26	4,29181	48	4,31374	20	95	70	43	9	47		
5	4,26980	27	4,29283	49	4,31471	21	92	69	44	4	46		
+6	4,27087	+28	4,29385	+50	4,31568	22	+89	-68	45	+0	-45		

Для приведения шкалъ барометровъ изъ одного размѣренія въ другія.

Превращ: миллиметр. ровъ.				Превращ: Франц: дюйм:				Превращ: Англ: дюймовъ.									
мил. метр.		Француз:		Франц.		Англис.		Миллиметр.		Анг.		Франц.		Миллиметр.			
м. м.	дю.	лин.	дюйм.	дю.	лин.	дю.	м. м.	дю.	лин.	лин.	м. м.	м. м.	м. м.	м. м.	м. м.		
730	27.	11,606	28,7407	27.	0	28,7757	730,89	28,8	27.	0,274	731,51	28.	11,534	756,91	28.	11,910	784,85
731	27.	0,049	28,7800		1	28,8645	733,14	28,9		1,400	734,05						
732	27.	0,493	28,8194		2	28,9533	735,40	29,0		2,526	736,59						
733	27.	0,936	28,8588		3	29,0421	737,66	29,1		3,652	739,13						
734	27.	1,379	28,8982		4	29,1309	739,91	29,2		4,778	741,67						
735	27.	1,823	28,9375		5	29,2197	742,17	29,3		5,904	744,21						
736	27.	2,266	28,9769		6	29,3086	744,42	29,4		7,030	746,75						
737	27.	2,709	29,0163		7	29,3974	746,68	29,5		8,156	749,29						
738	27.	3,152	29,0556		8	29,4862	748,94	29,6		9,282	751,83						
739	27.	3,596	29,0950		9	29,5750	751,19	29,7		10,408	754,37						
740	27.	4,039	29,1344	10	29,6638	753,45	29,8	11,534	756,91								
741	27.	4,482	29,1738	11	29,7526	755,70	29,9	0,659	759,45								
742	27.	4,926	29,2131	28.	0	29,8414	757,96	30,0	28.	1,785	761,99	28.	11,910	784,85			
743	27.	5,369	29,2525		1	29,9302	760,21	30,1		2,911	764,53						
744	27.	5,812	29,2919		2	30,0191	762,47	30,2		4,037	767,07						
745	27.	6,256	29,3312		3	30,1079	764,73	30,3		5,163	769,61						
746	27.	6,699	29,3706		4	30,1967	766,98	30,4		6,289	772,15						
747	27.	7,142	29,4100		5	30,2855	769,24	30,5		7,415	774,69						
748	27.	7,585	29,4494		6	30,3743	771,49	30,6		8,541	777,23						
749	27.	8,029	29,4887		7	30,4631	773,75	30,7		9,667	779,77						
750	27.	8,472	29,5281		8	30,5519	776,01	30,8		10,793	782,31						
751	27.	8,915	29,5675		9	30,6408	778,26	30,9		11,910	784,85						
752	27.	9,359	29,6068	Пропорц: часши.													
753	27.	9,802	29,6462	Миллиметровъ. Франц: лини. Англин: дюймы.													
754	27.	10,245	29,6856	Милл.	Франц.	Англ.	Фран.	Англ.	Милл.	Англ.	Франц.	Милл.	Англ.	Франц.	Милл.		
755	27.	10,688	29,7249	Мал.	Лин.	дюй.	Лин.	дюй.	Милл.	дюй.	лин.	м. м.	м. м.	м. м.	м. м.		
756	27.	11,132	29,7643	0,1	0,044	0,0039	0,1	0,0089	0,23	0,01	0,113	0,25	0,25	0,25	0,25		
757	27.	11,575	29,8037	0,2	0,089	0,0079	0,2	0,0178	0,45	0,02	0,225	0,50	0,50	0,50	0,50		
758	28.	0,018	29,8431	0,3	0,133	0,0118	0,3	0,0267	0,68	0,03	0,338	0,76	0,76	0,76	0,76		
759	28.	0,462	29,8824	0,4	0,177	0,0158	0,4	0,0355	0,90	0,04	0,450	1,02	1,02	1,02	1,02		
760	28.	0,905	29,9218	0,5	0,222	0,0197	0,5	0,0444	1,13	0,05	0,563	1,27	1,27	1,27	1,27		
761	28.	1,348	29,9612	0,6	0,266	0,0236	0,6	0,0533	1,35	0,06	0,675	1,52	1,52	1,52	1,52		
762	28.	1,792	30,0005	0,7	0,310	0,0275	0,7	0,0621	1,58	0,07	0,788	1,78	1,78	1,78	1,78		
763	28.	2,235	30,0399	0,8	0,355	0,0315	0,8	0,0711	1,80	0,08	0,900	2,03	2,03	2,03	2,03		
764	28.	2,678	30,0793	0,9	0,399	0,0354	0,9	0,0800	2,03	0,09	1,013	2,29	2,29	2,29	2,29		
765	28.	3,121	30,1187	1000 Миллиметровъ=443,296 Париж. лини=59,37084 Анг: дюйм													
766	28.	3,565	30,1580	1 Англ. футъ = 135,114 = Париж: лини													
767	28.	4,008	30,1974	1.) Log. Миллиметровъ = Log. пар: лини + 0,3533062.													
768	28.	4,451	30,2368	2.) Log. Париж. лини = Log. Миллиметр. + 9,6466938.													
769	28.	4,895	30,2761	3.) Log. Миллиметр. = Log. Англ: дюйм. + 1,4048253.													
770	28.	5,338	30,3155	4.) Log. Анг. дюймъ = Log. Миллиметр. + 8,5951747.													
771	28.	5,781	30,3549	5.) Log. Париж. лини = Log. Анг: дюймъ + 1,0515191.													
772	28.	6,224	30,3942	6.) Log. Анг: дюймъ = Log. Париж. лини + 8,9184809.													
773	28.	6,668	30,4336														
774	28.	7,111	30,4730														
775	28.	7,554	30,5124														
776	28.	7,998	30,5517														
777	28.	8,441	30,5911														
778	28.	8,884	30,6305														
779	28.	9,328	30,6698														
780	28.	9,771	30,7092														

Для приведенія шкалъ термометровъ изъ одного размѣренія въ другія.

Реоюра.			Сто градуснаго.			Фаренгейта.					
Реоюр.	Сто гра.	Фаренг.	Сто гр.	Реоюр.	Фаренг.	Фаренг.	Реоюр.	Сто гр.	Фаренг.	Реоюр.	Сто гр.
— 20°	— 25°,0	— 13°,0	— 25°	— 20°,0	— 13°,0	— 15°	— 20°,9	— 26°,1	+ 45°	+ 5°,8	+ 7°,2
19	23,8	10,8	24	19,2	11,2	14	20,5	25,5	46	6,2	7,8
18	22,5	8,5	23	18,4	9,4	13	20,0	25,0	47	6,7	8,3
17	21,3	6,3	22	17,6	7,6	12	19,6	24,4	48	7,1	8,9
16	20,0	4,0	21	16,8	5,8	11	19,1	23,9	49	7,6	9,4
— 15	— 18,8	— 1,8	— 20	— 16,0	— 4,0	— 10	— 18,7	— 23,3	+ 50	+ 8,0	+ 10,0
— 14	— 17,5	+ 0,5	— 19	— 15,2	— 2,2	— 9	— 18,2	— 22,8	+ 51	+ 8,4	+ 10,6
13	16,3	2,8	18	14,4	— 0,4	8	17,8	22,2	52	8,9	11,1
12	15,0	5,0	17	13,6	+ 1,4	7	17,3	21,7	53	9,3	11,7
11	13,8	7,3	16	12,8	3,2	6	16,9	21,1	54	9,8	12,2
— 10	— 12,5	+ 9,5	— 15	— 12,0	+ 5,0	— 5	— 16,4	— 20,6	+ 55	+ 10,2	+ 12,8
— 9	— 11,3	+ 11,8	— 14	— 11,2	+ 6,8	— 4	— 16,0	— 20,0	+ 56	+ 10,7	+ 13,3
8	10,0	14,0	13	10,4	8,6	3	15,6	19,4	57	11,1	13,9
7	8,8	16,3	12	9,6	10,4	2	15,1	18,9	58	11,6	14,4
6	7,5	18,5	11	8,8	12,2	— 1	14,7	18,3	59	12,0	15,0
— 5	— 6,3	+ 20,8	— 10	— 8,0	+ 14,0	0	— 14,2	— 17,8	+ 60	+ 12,4	+ 15,6
— 4	— 5,0	+ 23,0	— 9	— 7,2	+ 15,8	+ 1	— 13,8	— 17,2	+ 61	+ 12,9	+ 16,1
3	3,8	25,3	8	6,4	17,6	2	13,3	16,7	62	13,3	16,7
2	2,5	27,5	7	5,6	19,4	3	12,9	16,1	63	13,8	17,2
— 1	— 1,3	29,8	6	4,8	21,2	4	12,5	15,6	64	14,2	17,8
0	0,0	+ 32,0	— 5	— 4,0	+ 23,0	+ 5	— 12,0	— 15,0	+ 65	+ 14,7	+ 18,3
+ 1	+ 1,3	+ 34,3	— 4	— 3,2	+ 24,8	+ 6	— 11,6	— 14,4	+ 66	+ 15,1	+ 18,9
2	2,5	36,5	3	2,4	26,6	7	11,1	13,9	67	15,6	19,4
3	3,8	38,8	2	1,6	28,4	8	10,7	13,3	68	16,0	20,0
4	5,0	41,0	— 1	— 0,8	30,2	9	10,2	12,8	69	16,4	20,6
+ 5	+ 6,3	+ 43,3	0	0,0	+ 32,0	+ 10	— 9,8	— 12,2	+ 70	+ 16,9	+ 21,1
+ 6	+ 7,5	+ 45,5	+ 1	+ 0,8	+ 33,8	+ 11	— 9,3	— 11,7	+ 71	+ 17,3	+ 21,7
7	8,8	47,8	2	1,6	35,6	12	8,9	11,1	72	17,8	22,2
8	10,0	50,0	3	2,4	37,4	13	8,4	10,6	73	18,2	22,8
9	11,3	52,3	4	3,2	39,2	14	8,0	10,0	74	18,7	23,3
+ 10	+ 12,5	+ 54,5	+ 5	+ 4,0	+ 41,0	+ 15	— 7,6	— 9,4	+ 75	+ 19,1	+ 23,9
+ 11	+ 13,8	+ 56,8	+ 6	+ 4,8	+ 42,8	+ 16	— 7,1	— 8,9	+ 76	+ 19,6	+ 24,4
12	15,0	59,0	7	5,6	44,6	17	6,7	8,3	77	20,0	25,0
13	16,3	61,3	8	6,4	46,4	18	6,2	7,8	78	20,4	25,6
14	17,5	63,5	9	7,2	48,2	19	5,8	7,2	79	20,9	26,1
+ 15	+ 18,8	+ 65,8	+ 10	+ 8,0	+ 50,0	+ 20	— 5,3	— 6,7	+ 80	+ 21,3	+ 26,7
+ 16	+ 20,0	+ 68,0	+ 11	+ 8,8	+ 51,8	+ 21	— 4,9	— 6,1	+ 81	+ 21,8	+ 27,2
17	21,3	70,3	12	9,6	53,6	22	4,4	5,6	82	22,2	27,8
18	22,5	72,5	13	10,4	55,4	23	4,0	5,0	83	22,7	28,3
19	23,8	74,8	14	11,2	57,2	24	3,6	4,4	84	23,1	28,9
+ 20	+ 25,0	+ 77,0	+ 15	+ 12,0	+ 59,0	+ 25	— 3,1	— 3,9	— 85	+ 23,6	+ 29,4
+ 21	+ 26,3	+ 79,3	+ 16	+ 12,8	+ 60,8	+ 26	— 2,7	— 3,3	+ 86	+ 24,0	+ 30,0
22	27,5	81,5	17	13,9	62,6	27	2,2	2,8	87	24,4	30,6
23	28,8	83,8	18	14,4	64,4	28	1,8	2,2	88	24,9	31,1
24	30,0	86,0	19	15,2	66,2	29	1,3	1,7	89	25,3	31,7
25	31,3	88,3	+ 20	+ 16,0	+ 68,0	+ 30	— 0,9	— 1,1	+ 90	+ 25,8	+ 32,2
+ 26	+ 32,5	+ 90,5	+ 21	+ 16,8	+ 69,8	+ 31	— 0,4	— 0,6	+ 91	+ 26,2	+ 32,8
Пропорц. частн.			22	17,6	71,6	32	0,0	0,0	92	26,7	33,3
Реоюра.			23	18,4	73,4	33	+ 0,4	+ 0,6	93	27,1	33,9
Сто градус			24	19,2	75,2	34	0,9	1,1	94	27,6	34,4
с. г.	фар	с. г.	+ 25	+ 20,0	+ 77,0	+ 35	+ 1,3	+ 1,7	+ 95	+ 28,0	+ 35,0
о	о	о	+ 26	+ 20,8	+ 78,8	+ 36	+ 1,8	+ 2,2	+ 96	+ 28,4	+ 35,6
0,1	0,1	0,2	27	21,6	80,6	37	2,2	2,8	97	28,9	36,1
0,2	0,3	0,5	28	22,4	82,4	38	2,7	3,3	98	29,3	36,7
0,3	0,4	0,7	29	23,2	84,2	39	3,1	3,9	99	29,8	37,2
0,4	0,5	0,9	+ 30	+ 24,0	+ 86,0	+ 40	+ 3,6	+ 4,4	+ 100	+ 30,2	+ 37,8
0,5	0,6	1,1	+ 31	+ 24,8	+ 87,8	+ 41	+ 4,0	+ 5,0	+ 101	+ 30,7	+ 38,3
0,6	0,8	1,4	32	25,6	89,6	42	4,4	5,6	102	31,1	38,9
0,7	0,9	1,6	33	26,4	91,4	43	4,9	6,1	103	31,6	39,4
0,8	1,0	1,8	34	27,2	93,2	44	5,3	6,7	104	32,0	40,0
0,9	1,1	2,0	+ 35	+ 28,0	+ 95,0	+ 45	+ 5,8	+ 7,2	+ 105	+ 32,4	+ 40,6

Для счислѣніе Прецессіи неподвижныхъ звѣздъ.

Годъ.	m	n	Log. n.
	//	//	
1755	46,02978	20,06393	1,302116
1800	46,04367	20,05957	1,302322
1810	46,04676	20,05860	1,302301
1820	46,04984	20,05763	1,302280
1830	46,05293	20,05666	1,302259
1840	46,05601	20,05569	1,302238
1850	46,05910	20,05472	1,302217

Поправка b

Поправка λ

Дробь года = B

дробь года = B.

Дробь года для долготы
отъ Парика.

Число.	Дробь года.	Дней	Дробь года.
Геп. 0	0,0000	1	0,0027
10	0,0274	2	0,0055
20	0,0548	3	0,0082
30	0,0821	4	0,0110
Фев. 9	0,1095	5	0,0137
19	0,1369	6	0,0164
Мар. 1	0,1643	7	0,0192
11	0,1917	8	0,0219
21	0,2190	9	0,0246
31	0,2464		
Апр. 10	0,2738		
20	0,3012		
30	0,3285		
Май. 10	0,3559		
20	0,3833		
30	0,4107		
Июнь. 9	0,4381		
19	0,4654		
29	0,4928		
Июль. 9	0,5202		
19	0,5476		
29	0,5750		
Авг. 8	0,6023		
18	0,6297		
28	0,6571		
Сеп. 7	0,6845		
17	0,7118		
27	0,7392		
Окт. 7	0,7666		
17	0,7940		
27	0,8214		
Нол. 6	0,8487		
16	0,8761		
26	0,9035		
Дек. 6	0,9309		
16	0,9583		
26	0,9856		
36	1,0130		

Годъ.	b
1820	— 26 + 1
1821	— 5
1822	— 12
1823	— 18
1824	— 25 + 2
1825	— 4
1826	— 11
1827	— 18
1828	— 24 + 3
1829	— 3
1830	— 10
1831	— 17
1832	— 23 + 4
1833	— 3
1834	— 9
1835	— 16
1836	— 22 + 5
1837	— 1
1838	— 8
1839	— 15
1840	— 22 + 6
1841	— 1
1842	— 7
1843	— 14
1844	— 21 + 7
1845	— 0
1846	— 7
1847	— 13
1848	— 20 + 7
1849	— 1
1850	— 6

Долгота отъ Парика.	λ
ч. м.	
0.53	0,0001
1.45	0,0002
2.38	0,0003
3.30	0,0004
4.23	0,0005
5.16	0,0006
6. 8	0,0007
7. 1	0,0008
7.53	0,0009
8.46	0,0010
9.39	0,0011
10.31	0,0012
11.24	0,0013
12.16	0,0014
13. 9	0,0015
14. 2	0,0016
14.54	0,0017
15.47	0,0018
16.39	0,0019
17.32	0,0020
18.25	0,0021
19.17	0,0022
20.10	0,0023
21. 2	0,0024
21.55	0,0025
22.47	0,0026
23.39	0,0027

Т А Б Л И Ц А XVII и XVIII.

Аберракціи.

часть 1 А, Аргум: ($\alpha - \odot$)					часть 2 В, Аргум: ($\alpha + \odot$)				
град.	О VI	І VII	II VIII	град.	град.	О VI	І VII	II VIII	град.
0	19,42	16,82	9,71	30	0	0,84	0,73	0,42	30
1	19,41	16,61	9,41	29	1	0,81	0,72	0,41	29
2	19,41	16,47	9,12	28	2	0,81	0,71	0,39	28
3	19,39	16,29	8,82	27	3	0,81	0,70	0,38	27
4	19,37	16,10	8,51	26	4	0,81	0,69	0,37	26
5	19,34	15,91	8,21	25	5	0,83	0,69	0,35	25
6	19,31	15,71	7,90	24	6	0,83	0,68	0,34	24
7	19,27	15,51	7,59	23	7	0,83	0,67	0,33	23
8	19,23	15,30	7,27	22	8	0,83	0,66	0,31	22
9	19,18	15,09	6,96	21	9	0,83	0,65	0,30	21
10	19,12	14,88	6,64	20	10	0,83	0,61	0,29	20
11	19,06	14,66	6,32	19	11	0,82	0,63	0,27	19
12	18,99	14,43	6,00	18	12	0,82	0,62	0,26	18
13	18,92	14,20	5,68	17	13	0,82	0,61	0,25	17
14	18,84	13,97	5,35	16	14	0,81	0,60	0,23	16
15	18,76	13,73	5,03	15	15	0,81	0,59	0,22	15
16	18,67	13,49	4,70	14	16	0,81	0,58	0,20	14
17	18,57	13,24	4,37	13	17	0,80	0,57	0,19	13
18	18,47	12,99	4,04	12	18	0,80	0,56	0,17	12
19	18,36	12,74	3,71	11	19	0,79	0,55	0,16	11
20	18,25	12,48	3,37	10	20	0,79	0,54	0,15	10
21	18,13	12,22	3,04	9	21	0,78	0,53	0,13	9
22	18,00	11,96	2,70	8	22	0,78	0,52	0,12	8
23	17,87	11,69	2,37	7	23	0,77	0,50	0,10	7
24	17,74	11,41	2,03	6	24	0,77	0,49	0,09	6
25	17,60	11,14	1,69	5	25	0,76	0,48	0,07	5
26	17,45	10,86	1,35	4	26	0,75	0,47	0,06	4
27	17,30	10,58	1,02	3	27	0,75	0,46	0,04	3
28	17,15	10,29	0,68	2	28	0,74	0,44	0,03	2
29	16,98	10,00	0,34	1	29	0,73	0,43	0,02	1
30	16,82	9,71	0,00	0	30	0,73	0,42	0,01	0
град.	— +	— +	— +	град.	град.	— +	— +	— +	град.
	XI V	X IV	IX III			XI V	X IV	IX III	

часть 1 А' Аргум: ($\alpha - \odot$)					часть 2 В' Аргум: ($\alpha + \odot$)					часть 3. и 4 С' D' Аргум: ($\delta - \odot$) и ($\delta + \odot$)				
град.	О VI	І VII	II VIII	град.	град.	О VI	І VII	II VIII	град.	град.	О VI	І VII	II VIII	град.
0	0,00	9,71	16,82	30	0	0,01	0,42	0,73	30	0	4,03	3,49	2,02	30
1	0,34	10,00	16,98	29	1	0,02	0,43	0,73	29	1	4,03	3,46	1,96	29
2	0,68	10,29	17,15	28	2	0,03	0,44	0,74	28	2	4,03	3,42	1,89	28
3	1,02	10,58	17,30	27	3	0,04	0,46	0,75	27	3	4,03	3,38	1,83	27
4	1,35	10,86	17,45	26	4	0,06	0,47	0,75	26	4	4,02	3,34	1,77	26
5	1,69	11,14	17,60	25	5	0,07	0,48	0,76	25	5	4,02	3,30	1,70	25
6	2,03	11,41	17,74	24	6	0,09	0,49	0,77	24	6	4,01	3,26	1,64	24
7	2,37	11,69	17,87	23	7	0,10	0,50	0,77	23	7	4,00	3,22	1,58	23
8	2,70	11,96	18,00	22	8	0,12	0,52	0,78	22	8	3,99	3,18	1,51	22
9	3,04	12,22	18,13	21	9	0,13	0,53	0,78	21	9	3,98	3,13	1,45	21
10	3,37	12,48	18,25	20	10	0,15	0,54	0,79	20	10	3,97	3,09	1,38	20
11	3,71	12,74	18,36	19	11	0,16	0,55	0,79	19	11	3,96	3,04	1,31	19
12	4,04	12,99	18,47	18	12	0,17	0,56	0,80	18	12	3,95	3,00	1,25	18
13	4,37	13,24	18,57	17	13	0,19	0,57	0,80	17	13	3,93	2,95	1,18	17
14	4,70	13,49	18,67	16	14	0,20	0,58	0,81	16	14	3,91	2,90	1,11	16
15	5,03	13,73	18,76	15	15	0,22	0,59	0,81	15	15	3,90	2,85	1,04	15
16	5,35	13,97	18,84	14	16	0,23	0,60	0,81	14	16	3,88	2,80	0,98	14
17	5,68	14,20	18,92	13	17	0,25	0,61	0,82	13	17	3,86	2,75	0,91	13
18	6,00	14,43	18,99	12	18	0,26	0,62	0,82	12	18	3,84	2,70	0,84	12
19	6,32	14,66	19,06	11	19	0,27	0,63	0,82	11	19	3,81	2,65	0,77	11
20	6,64	14,88	19,12	10	20	0,29	0,64	0,83	10	20	3,79	2,59	0,70	10
21	6,96	15,09	19,18	9	21	0,30	0,65	0,83	9	21	3,77	2,54	0,63	9
22	7,27	15,30	19,23	8	22	0,31	0,66	0,83	8	22	3,71	2,48	0,56	8
23	7,59	15,51	19,27	7	23	0,33	0,67	0,83	7	23	3,71	2,43	0,49	7
24	7,90	15,71	19,31	6	24	0,34	0,68	0,83	6	24	3,68	2,37	0,42	6
25	8,21	15,91	19,34	5	25	0,35	0,69	0,83	5	25	3,66	2,31	0,35	5
26	8,51	16,10	19,37	4	26	0,37	0,69	0,84	4	26	3,63	2,26	0,28	4
27	8,82	16,29	19,38	3	27	0,38	0,70	0,84	3	27	3,59	2,20	0,21	3
28	9,12	16,47	19,39	2	28	0,39	0,71	0,84	2	28	3,56	2,14	0,14	2
29	9,41	16,64	19,41	1	29	0,41	0,72	0,84	1	29	3,53	2,08	0,07	1
30	9,71	16,82	19,42	0	30	0,42	0,73	0,84	0	30	3,49	2,02	0,00	0
град.	— +	— +	— +	град.	град.	— +	— +	— +	град.	град.	— +	— +	— +	град.
	XI V	X IV	IX III			XI V	X IV	IX III			XI V	X IV	IX III	

Для Пунации въ прямомъ восхожденн.

Таблиц. 1 даетъ А Аргументъ δ					
град	0 VI	I VII	II VIII	град	
	— +	— +	— +		
0	0,00	7,54	13,17	30	
1	0,26	7,77	13,31	29	
2	0,52	7,99	13,44	28	
3	0,79	8,22	13,57	27	
4	1,05	8,44	13,69	26	
5	1,31	8,66	13,81	25	
6	1,57	8,87	13,93	24	
7	1,83	9,09	14,04	23	
8	2,09	9,30	14,15	22	
9	2,35	9,51	14,25	21	
10	2,61	9,71	14,35	20	
11	2,87	9,92	14,44	19	
12	3,13	10,12	14,53	18	
13	3,38	10,32	14,62	17	
14	3,64	10,51	14,70	16	
15	3,89	10,70	14,78	15	
16	4,15	10,89	14,85	14	
17	4,40	11,08	14,92	13	
18	4,65	11,26	14,98	12	
19	4,90	11,44	15,04	11	
20	5,15	11,61	15,10	10	
21	5,39	11,78	15,15	9	
22	5,64	11,95	15,19	8	
23	5,88	12,12	15,23	7	
24	6,12	12,28	15,27	6	
25	6,36	12,44	15,31	5	
26	6,60	12,59	15,33	4	
27	6,84	12,74	15,35	3	
28	7,08	12,89	15,37	2	
29	7,31	13,03	15,39	1	
30	7,54	13,17	15,39	0	
град	+ —	+ —	+ —	град	
	XI V	X IV	IX III		

Таблиц. 3 даетъ С. Аргументъ: $\alpha - \delta$					
град	0 VI	I VII	II VIII	град	
	— +	— +	— +		
0	7,83	6,78	3,91	30	
1	7,83	6,71	3,80	29	
2	7,83	6,64	3,68	28	
3	7,82	6,57	3,56	27	
4	7,81	6,50	3,43	26	
5	7,80	6,41	3,31	25	
6	7,79	6,33	3,19	24	
7	7,77	6,25	3,06	23	
8	7,75	6,17	2,93	22	
9	7,73	6,09	2,81	21	
10	7,71	6,00	2,68	20	
11	7,69	5,91	2,55	19	
12	7,66	5,82	2,42	18	
13	7,63	5,73	2,29	17	
14	7,60	5,63	2,16	16	
15	7,56	5,54	2,03	15	
16	7,53	5,44	1,89	14	
17	7,49	5,34	1,76	13	
18	7,45	5,24	1,63	12	
19	7,40	5,14	1,49	11	
20	7,36	5,03	1,36	10	
21	7,31	4,93	1,22	9	
22	7,26	4,82	1,09	8	
23	7,21	4,71	0,95	7	
24	7,15	4,60	0,82	6	
25	7,10	4,49	0,68	5	
26	7,04	4,38	0,55	4	
27	6,98	4,26	0,41	3	
28	6,91	4,15	0,27	2	
29	6,85	4,03	0,14	1	
30	6,78	3,91	0,00	0	
град	+ —	+ —	+ —	град	
	XI V	X IV	IX III		

Таблиц. 4 даетъ D Аргументъ $\alpha + \delta$					
град	0 VI	I VII	II VIII	град	
	— +	— +	— +		
0	1,15	0,99	0,57	30	
1	1,15	0,98	0,56	29	
2	1,15	0,97	0,51	28	
3	1,15	0,96	0,52	27	
4	1,14	0,95	0,50	26	
5	1,14	0,94	0,49	25	
6	1,14	0,93	0,17	24	
7	1,14	0,92	0,15	23	
8	1,11	0,90	0,13	22	
9	1,13	0,89	0,11	21	
10	1,13	0,88	0,39	20	
11	1,13	0,87	0,37	19	
12	1,12	0,85	0,35	18	
13	1,12	0,84	0,34	17	
14	1,11	0,83	0,32	16	
15	1,11	0,81	0,30	15	
16	1,10	0,80	0,28	14	
17	1,10	0,78	0,26	13	
18	1,09	0,77	0,24	12	
19	1,09	0,75	0,22	11	
20	1,08	0,74	0,20	10	
21	1,07	0,72	0,18	9	
22	1,06	0,71	0,16	8	
23	1,06	0,69	0,14	7	
24	1,05	0,67	0,12	6	
25	1,04	0,66	0,10	5	
26	1,03	0,64	0,08	4	
27	1,02	0,63	0,06	3	
28	1,01	0,61	0,04	2	
29	1,00	0,59	0,02	1	
30	0,99	0,57	0,00	0	
град	+ —	+ —	+ —	град	
	XI V	X IV	IX III		

Таблиц. 2 даетъ B Аргументъ $2 \odot$					
град	0 VI	I VII	II VIII	град	
	— +	— +	— +		
0	0,00	0,61	1,06	30	
2	0,01	0,65	1,08	28	
4	0,09	0,69	1,10	26	
6	0,13	0,72	1,12	24	
8	0,17	0,75	1,14	22	
10	0,21	0,79	1,15	20	
12	0,26	0,82	1,17	18	
14	0,30	0,85	1,18	16	
16	0,34	0,88	1,19	14	
18	0,38	0,91	1,20	12	
20	0,42	0,94	1,21	10	
22	0,46	0,97	1,21	8	
24	0,50	0,99	1,22	6	
26	0,54	1,02	1,22	4	
28	0,58	1,04	1,33	2	
30	0,61	1,06	1,23	0	
град	+ —	+ —	+ —	град	
	XI V	X IV	IX III		

Таблиц. 5 даетъ E Аргументъ $\alpha - 2 \odot$					
град	0 VI	I VII	II VIII	град	
	— +	— +	— +		
0	0,56	0,48	0,28	30	
2	0,56	0,47	0,26	28	
4	0,55	0,46	0,25	26	
6	0,55	0,45	0,23	24	
8	0,55	0,44	0,21	22	
10	0,55	0,43	0,19	20	
12	0,54	0,41	0,17	18	
14	0,54	0,40	0,16	16	
16	0,54	0,39	0,14	14	
18	0,53	0,37	0,12	12	
20	0,53	0,36	0,10	10	
22	0,52	0,35	0,08	8	
24	0,51	0,33	0,06	6	
26	0,50	0,32	0,03	4	
28	0,49	0,30	0,02	2	
30	0,48	0,28	0,00	0	
град	+ —	+ —	+ —	град	
	XI V	X IV	IX III		

Таблиц. 6 даетъ F Аргументъ $\alpha - 2 \delta$					
град	0 VI	I VII	II VIII	град	
	— +	— +	— +		
0	0,08	0,07	0,04	30	
2	0,08	0,07	0,04	28	
4	0,08	0,07	0,04	26	
6	0,08	0,07	0,03	24	
8	0,08	0,07	0,03	22	
10	0,08	0,07	0,03	20	
12	0,08	0,06	0,03	18	
14	0,08	0,06	0,02	16	
16	0,08	0,06	0,02	14	
18	0,08	0,06	0,02	12	
20	0,08	0,05	0,01	10	
22	0,08	0,05	0,01	8	
24	0,08	0,05	0,01	6	
26	0,08	0,05	0,00	4	
28	0,08	0,04	0,00	2	
30	0,07	0,04	0,00	0	
град	+ —	+ —	+ —	град	
	XI V	X IV	IX III		

ТАБЛИЦА XX.

Для Путицы въ склонении.

Таблиц: 1 даетъ С'							
Аргументъ ($\alpha - \delta$)							
град.	O VI		I VII		II VIII		град.
	+	-	+	-	+	-	
	"		"		"		
0	0,00		3,91		6,78		30
1	0,14		4,03		6,85		29
2	0,27		4,15		6,91		28
3	0,41		4,26		6,98		27
4	0,55		4,38		7,04		26
5	0,68		4,49		7,10		25
6	0,82		4,60		7,15		24
7	0,95		4,71		7,21		23
8	1,09		4,82		7,26		22
9	1,22		4,93		7,31		21
10	1,36		5,03		7,36		20
11	1,49		5,14		7,40		19
12	1,63		5,24		7,45		18
13	1,76		5,34		7,49		17
14	1,89		5,44		7,53		16
15	2,03		5,54		7,56		15
16	2,16		5,63		7,60		14
17	2,29		5,73		7,63		13
18	2,42		5,82		7,66		12
19	2,55		5,91		7,69		11
20	2,68		6,00		7,71		10
21	2,81		6,09		7,73		9
22	2,93		6,17		7,75		8
23	3,06		6,25		7,77		7
24	3,19		6,33		7,79		6
25	3,31		6,41		7,80		5
26	3,43		6,49		7,81		4
27	3,56		6,57		7,82		3
28	3,68		6,64		7,83		2
29	3,80		6,71		7,83		1
30	3,91		6,78		7,83		0
град.	-	+	-	+	-	+	град.
	XI	V	X	IV	IX	III	

Таблиц: 2 даетъ D' Аргументъ ($\alpha + \delta$)							
град.	O VI		I VII		II VIII		град.
	+	-	+	-	+	-	
0	0,00		0,57		0,99		30
1	0,02		0,59		1,00		29
2	0,04		0,61		1,01		28
3	0,06		0,63		1,02		27
4	0,08		0,64		1,03		26
5	0,10		0,66		1,04		25
6	0,12		0,67		1,05		24
7	0,14		0,69		1,06		23
8	0,16		0,71		1,06		22
9	0,18		0,72		1,07		21
10	0,20		0,74		1,08		20
11	0,22		0,75		1,09		19
12	0,24		0,77		1,09		18
13	0,26		0,78		1,10		17
14	0,28		0,80		1,10		16
15	0,30		0,81		1,11		15
16	0,32		0,83		1,11		14
17	0,34		0,84		1,12		13
18	0,35		0,85		1,12		12
19	0,37		0,87		1,13		11
20	0,39		0,88		1,13		10
21	0,41		0,89		1,13		9
22	0,43		0,90		1,14		8
23	0,45		0,92		1,14		7
24	0,47		0,93		1,14		6
25	0,49		0,94		1,14		5
26	0,50		0,95		1,14		4
27	0,52		0,96		1,15		3
28	0,54		0,97		1,15		2
29	0,56		0,98		1,15		1
30	0,57		0,99		1,15		0
град.	-	+	-	+	-	+	град.
	XI	V	X	IV	IX	III	

Таблиц: 3 даетъ E'							
Аргументъ ($\alpha - 2 \odot$)							
град.	O VI		I VII		II VIII		град.
	+	-	+	-	+	-	
0	0,00		0,28		0,48		30
2	0,02		0,30		0,49		28
4	0,04		0,32		0,50		26
6	0,06		0,33		0,51		24
8	0,08		0,35		0,52		22
10	0,10		0,36		0,52		20
12	0,12		0,37		0,53		18
14	0,14		0,39		0,53		16
16	0,16		0,40		0,54		14
18	0,17		0,41		0,54		12
20	0,19		0,43		0,54		10
22	0,21		0,44		0,55		8
24	0,23		0,45		0,55		6
26	0,25		0,46		0,55		4
28	0,27		0,47		0,55		2
30	0,28		0,48		0,56		0
град.	-	+	-	+	-	+	град.
	XI	V	X	IV	IX	III	

Таблиц: 4 даетъ F'							
Аргументъ ($\alpha - 2 \delta$)							
град.	O VI		I VII		II VIII		град.
	—	+	—	+	—	+	
0	0,00		0,04		0,07		30
2	0,00		0,05		0,08		28
4	0,00		0,05		0,08		26
6	0,01		0,05		0,08		24
8	0,01		0,05		0,08		22
10	0,01		0,06		0,08		20
12	0,02		0,06		0,08		18
14	0,02		0,06		0,08		16
16	0,02		0,06		0,08		14
18	0,03		0,07		0,08		12
20	0,03		0,07		0,08		10
22	0,03		0,07		0,08		8
24	0,03		0,07		0,08		6
26	0,04		0,07		0,08		4
28	0,04		0,07		0,08		2
30	0,04		0,07		0,08		0
град.	+	—	+	—	—	+	град.
	XI	V	X	IV	XI	III	

Патуральные синусы, тангенсы и секансы.

град.	синусы.	разн. для 1'	танген.	разн. для 1'	секансы.	разн. для 1'	град.	синусы.	разн. для 1'	танген.	разн. для 1'	секансы.	разн. для 1'
0° 0'	0,00000	29	0,00000	29	1,00000		10° 0'	0,17365	29	0,17633	30	1,01543	
10 0,00291		29	0,00291	29	1,00000		10 0,17651		29	0,17933	30	1,01595	5
20 0,00582		29	0,00582	29	1,00002		20 0,17937		29	0,18233	30	1,01649	5
30 0,00873		29	0,00873	29	1,00004		30 0,18224		29	0,18534	30	1,01703	5
40 0,01164		29	0,01164	29	1,00008		40 0,18509		29	0,18835	30	1,01758	6
50 0,01454		29	0,01455	29	1,00011		50 0,18795		29	0,19136	30	1,01815	6
1 0 0,01745		29	0,01746	29	1,00015	1	11 0 0,19081		29	0,19438	30	1,01872	6
10 0,02036		29	0,02037	29	1,00021	1	10 0,19366		29	0,19740	30	1,01930	6
20 0,02327		29	0,02328	29	1,00027	1	20 0,19652		29	0,20012	30	1,01989	6
30 0,02618		29	0,02619	29	1,00034	1	30 0,19938		29	0,20345	30	1,02049	6
40 0,02908		29	0,02910	29	1,00042	1	40 0,20222		28	0,20648	30	1,02110	6
50 0,03199		29	0,03201	29	1,00051	1	50 0,20507		28	0,20952	30	1,02171	6
2 0 0,03490		29	0,03492	29	1,00061	1	12 0 0,20791		28	0,21256	30	1,02234	6
10 0,03781		29	0,03784	29	1,00072	1	10 0,21076		28	0,21560	30	1,02298	6
20 0,04071		29	0,04075	29	1,00084	1	20 0,21360		28	0,21864	31	1,02362	7
30 0,04362		29	0,04366	29	1,00095	1	30 0,21644		28	0,22169	31	1,02428	7
40 0,04653		29	0,04658	29	1,00108	1	40 0,21928		28	0,22475	31	1,02494	7
50 0,04943		29	0,04949	29	1,00122	1	50 0,22212		28	0,22781	31	1,02562	7
3 0 0,05234		29	0,05241	29	1,00137	2	13 0 0,22495		28	0,23087	31	1,02630	7
10 0,05521		29	0,05533	29	1,00153	2	10 0,22778		28	0,23393	31	1,02700	7
20 0,05814		29	0,05824	29	1,00169	2	20 0,23062		28	0,23700	31	1,02770	7
30 0,06105		29	0,06116	29	1,00187	2	30 0,23345		28	0,24008	31	1,02842	7
40 0,06395		29	0,06408	29	1,00205	2	40 0,23627		28	0,24316	31	1,02914	7
50 0,06685		29	0,06700	29	1,00224	2	50 0,23910		28	0,24624	31	1,02987	7
4 0 0,06976		29	0,06993	29	1,00244	2	14 0 0,24192		28	0,24933	31	1,03061	8
10 0,07266		29	0,07285	29	1,00265	2	10 0,24474		28	0,25242	31	1,03137	8
20 0,07556		29	0,07578	29	1,00287	2	20 0,24756		28	0,25552	31	1,03213	8
30 0,07846		29	0,07870	29	1,00309	2	30 0,25038		28	0,25862	31	1,03290	8
40 0,08136		29	0,08163	29	1,00333	2	40 0,25320		28	0,26172	31	1,03368	8
50 0,08426		29	0,08456	29	1,00357	3	50 0,25601		28	0,26483	31	1,03447	8
5 0 0,08716		29	0,08749	29	1,00382	3	15 0 0,25882		28	0,26795	31	1,03528	8
10 0,09005		29	0,09042	29	1,00408	3	10 0,26163		28	0,27107	31	1,03609	8
20 0,09295		29	0,09335	29	1,00435	3	20 0,26443		28	0,27419	31	1,03691	8
30 0,09585		29	0,09629	29	1,00463	3	30 0,26724		28	0,27732	31	1,03774	8
40 0,09874		29	0,09923	29	1,00491	3	40 0,27004		28	0,28046	31	1,03858	8
50 0,10164		29	0,10216	29	1,00521	3	50 0,27284		28	0,28360	31	1,03944	9
6 0 0,10453		29	0,10510	29	1,00551	3	16 0 0,27564		28	0,28675	32	1,04030	9
10 0,10742		29	0,10805	29	1,00582	3	10 0,27843		28	0,28990	32	1,04117	9
20 0,11031		29	0,11099	29	1,00614	3	20 0,28123		28	0,29305	32	1,04206	9
30 0,11320		29	0,11394	29	1,00647	3	30 0,28402		28	0,29621	32	1,04295	9
40 0,11609		29	0,11688	29	1,00681	3	40 0,28680		28	0,29938	32	1,04385	9
50 0,11898		29	0,11983	30	1,00715	4	50 0,28959		28	0,30255	32	1,04477	9
7 0 0,12187		29	0,12278	30	1,00751	4	17 0 0,29237		28	0,30573	32	1,04569	9
10 0,12476		29	0,12574	30	1,00787	4	10 0,29515		28	0,30891	32	1,04663	9
20 0,12764		29	0,12869	30	1,00825	4	20 0,29793		28	0,31210	32	1,04757	9
30 0,13053		29	0,13165	30	1,00863	4	30 0,30071		28	0,31530	32	1,04853	10
40 0,13341		29	0,13461	30	1,00902	4	40 0,30348		28	0,31850	32	1,04950	10
50 0,13629		29	0,13758	30	1,00942	4	50 0,30625		28	0,32171	32	1,05047	10
8 0 0,13917		29	0,14054	30	1,00983	4	18 0 0,30902		28	0,32492	32	1,05146	10
10 0,14205		29	0,14351	30	1,01024	4	10 0,31178		28	0,32814	32	1,05246	10
20 0,14493		29	0,14648	30	1,01067	4	20 0,31454		28	0,33136	32	1,05347	10
30 0,14781		29	0,14945	30	1,01111	4	30 0,31730		28	0,33460	32	1,05449	10
40 0,15069		29	0,15243	30	1,01155	4	40 0,32006		28	0,33783	32	1,05552	10
50 0,15356		29	0,15540	30	1,01200	5	50 0,32282		28	0,34108	33	1,05657	11
9 0 0,15643		29	0,15838	30	1,01247	5	19 0 0,32557		28	0,34433	33	1,05762	11
10 0,15931		29	0,16137	30	1,01294	5	10 0,32832		27	0,34758	33	1,05869	11
20 0,16218		29	0,16435	30	1,01342	5	20 0,33106		27	0,35085	33	1,05976	11
30 0,16505		29	0,16734	30	1,01391	5	30 0,33381		27	0,35412	33	1,06085	11
40 0,16792		29	0,17033	30	1,01440	5	40 0,33655		27	0,35740	33	1,06195	11
50 0,17078		29	0,17333	30	1,01491	5	50 0,33929		27	0,36068	33	1,06306	11
10 0 0,17365		29	0,17633	30	1,01543	5	20 0 0,34202		27	0,36397	33	1,06418	11

град.	спусы.	разн. для 1'	шагген.	разн. для 1'	секалсы.	разн. для 1'	град.	спусы.	разн. для 1'	шагген.	разн. для 1'	секалсы.	разн. для 1'
20° 0	0,34202	27	0,36397	33	1,06418	11	30° 0	0,50000	25	0,57735	39	1,15470	20
10	0,34475	27	0,36727	33	1,06531	11	10	0,50252	25	0,58124	39	1,15665	20
20	0,34748	27	0,37057	33	1,06645	12	20	0,50503	25	0,58513	39	1,15861	20
30	0,35021	27	0,37388	33	1,06761	12	30	0,50754	25	0,58905	39	1,16059	20
40	0,35293	27	0,37720	33	1,06878	12	40	0,51004	25	0,59297	39	1,16259	20
50	0,35565	27	0,38053	33	1,06995	12	50	0,51254	25	0,59691	40	1,16460	20
21° 0	0,35837	27	0,38386	33	1,07115	12	31° 0	0,51504	25	0,60086	40	1,16663	21
10	0,36108	27	0,38721	34	1,07235	12	10	0,51753	25	0,60483	40	1,16868	21
20	0,36379	27	0,39055	34	1,07356	12	20	0,52002	25	0,60881	40	1,17075	21
30	0,36650	27	0,39391	34	1,07479	12	30	0,52250	25	0,61280	40	1,17283	21
40	0,36921	27	0,39727	34	1,07602	12	40	0,52498	25	0,61681	40	1,17493	21
50	0,37191	27	0,40065	34	1,07727	13	50	0,52745	25	0,62083	40	1,17704	21
22° 0	0,37461	27	0,40403	34	1,07853	13	32° 0	0,52992	25	0,62487	41	1,17918	22
10	0,37730	27	0,40741	34	1,07981	13	10	0,53238	25	0,62892	41	1,18133	22
20	0,37999	27	0,41081	34	1,08109	13	20	0,53484	25	0,63299	41	1,18350	22
30	0,38268	27	0,41421	34	1,08239	13	30	0,53730	25	0,63707	41	1,18569	22
40	0,38537	27	0,41763	34	1,08370	13	40	0,53975	25	0,64117	41	1,18790	22
50	0,38805	27	0,42105	34	1,08503	13	50	0,54220	25	0,64528	41	1,19012	22
23° 0	0,39073	27	0,42447	34	1,08636	14	33° 0	0,54461	24	0,64911	41	1,19236	23
10	0,39341	27	0,42791	35	1,08771	14	10	0,54708	24	0,65355	41	1,19463	23
20	0,39608	27	0,43136	35	1,08907	14	20	0,54951	24	0,65771	42	1,19691	23
30	0,39875	27	0,43481	35	1,09044	14	30	0,55194	24	0,66189	42	1,19920	23
40	0,40142	27	0,43823	35	1,09183	14	40	0,55436	24	0,66608	42	1,20152	23
50	0,40408	27	0,44175	35	1,09323	14	50	0,55678	24	0,67028	42	1,20386	23
24° 0	0,40674	27	0,44523	35	1,09464	14	34° 0	0,55919	24	0,67451	42	1,20622	24
10	0,40939	27	0,44872	35	1,09606	14	10	0,56160	24	0,67875	42	1,20859	24
20	0,41204	27	0,45222	35	1,09750	14	20	0,56401	24	0,68301	43	1,21099	24
30	0,41469	27	0,45573	35	1,09895	15	30	0,56641	24	0,68728	43	1,21341	24
40	0,41734	27	0,45924	35	1,10041	15	40	0,56880	24	0,69157	43	1,21584	24
50	0,41998	26	0,46277	35	1,10189	15	50	0,57119	24	0,69588	43	1,21830	25
25° 0	0,42262	26	0,46631	35	1,10338	15	35° 0	0,57358	24	0,70021	43	1,22077	25
10	0,42525	26	0,46983	36	1,10488	15	10	0,57596	24	0,70455	43	1,22327	25
20	0,42788	26	0,47341	36	1,10640	15	20	0,57833	24	0,70891	44	1,22579	25
30	0,43051	26	0,47698	36	1,10793	15	30	0,58070	24	0,71329	44	1,22833	25
40	0,43313	26	0,48055	36	1,10947	15	40	0,58307	24	0,71769	44	1,23089	26
50	0,43575	26	0,48414	36	1,11103	16	50	0,58543	24	0,72211	44	1,23347	26
26° 0	0,43837	26	0,48773	36	1,11260	16	35° 0	0,58779	24	0,72654	44	1,23607	26
10	0,44098	26	0,49134	36	1,11419	16	10	0,59014	24	0,73100	45	1,23869	27
20	0,44359	26	0,49495	36	1,11579	16	20	0,59248	23	0,73547	45	1,24134	27
30	0,44620	26	0,49858	36	1,11740	16	30	0,59482	23	0,73996	45	1,24400	27
40	0,44880	26	0,50222	37	1,11903	16	40	0,59716	23	0,74447	45	1,24669	27
50	0,45140	26	0,50587	37	1,12067	17	50	0,59949	23	0,74900	45	1,24940	27
27° 0	0,45399	26	0,50953	37	1,12233	17	36° 0	0,60182	23	0,75355	46	1,25214	28
10	0,45658	26	0,51320	37	1,12400	17	10	0,60414	23	0,75812	46	1,25489	28
20	0,45917	26	0,51688	37	1,12568	17	20	0,60645	23	0,76272	46	1,25767	28
30	0,46175	26	0,52057	37	1,12738	17	30	0,60876	23	0,76733	46	1,26047	28
40	0,46433	26	0,52427	37	1,12910	17	40	0,61107	23	0,77196	47	1,26330	29
50	0,46690	26	0,52798	37	1,13083	17	50	0,61337	23	0,77661	47	1,26615	29
28° 0	0,46947	26	0,53171	37	1,13257	18	37° 0	0,61566	23	0,78129	47	1,26902	29
10	0,47204	26	0,53545	38	1,13433	18	10	0,61795	23	0,78598	47	1,27191	29
20	0,47460	26	0,53920	38	1,13610	18	20	0,62024	23	0,79070	47	1,27483	29
30	0,47716	26	0,54296	38	1,13789	18	30	0,62251	23	0,79544	47	1,27778	30
40	0,47971	26	0,54673	38	1,13970	18	40	0,62479	23	0,80020	48	1,28075	30
50	0,48226	26	0,55051	38	1,14152	18	50	0,62705	23	0,80498	48	1,28374	30
29° 0	0,48481	25	0,55431	38	1,14335	19	38° 0	0,62932	23	0,80978	48	1,28676	30
10	0,48735	25	0,55812	38	1,14521	19	10	0,63158	23	0,81461	49	1,28980	31
20	0,48989	25	0,56194	38	1,14707	19	20	0,63383	23	0,81946	49	1,29287	31
30	0,49242	25	0,56577	39	1,14896	19	30	0,63608	22	0,82434	49	1,29597	31
40	0,49495	25	0,56962	39	1,15085	19	40	0,63832	22	0,82923	49	1,29909	31
50	0,49748	25	0,57348	39	1,15277	19	50	0,64056	22	0,83415	50	1,30223	31
30° 0	0,50000	25	0,57735	39	1,15470	19	40° 0	0,64279	22	0,83910	50	1,30541	32

Продолжение.

град.	синусы.	разн. для 1'	танген.	разн. для 1'	секансы.	разн. для 1'	град.	синусы.	разн. для 1'	танген.	разн. для 1'	секансы.	разн. для 1'
40° 0'	0,61279	22	0,83916	50	1,30541	32	50° 0'	0,76604	19	1,19175	71	1,55572	51
10	0,64501	22	0,84407	50	1,30861	32	10	0,76791	19	1,19882	71	1,56114	55
20	0,64723	22	0,84906	50	1,31183	33	20	0,76977	19	1,20593	72	1,56661	55
30	0,64945	22	0,85408	50	1,31509	33	30	0,77162	19	1,21310	72	1,57213	56
40	0,65166	22	0,85911	51	1,31837	33	40	0,77347	18	1,22031	73	1,57771	56
50	0,65386	22	0,86419	51	1,32168	33	50	0,77531	18	1,22758	73	1,58333	57
41 0	0,65606	22	0,86929	51	1,32501	34	51 0	0,77715	18	1,23490	74	1,58902	57
10	0,65825	22	0,87441	51	1,32838	34	10	0,77897	18	1,24227	74	1,59475	58
20	0,66044	22	0,87955	52	1,33177	34	20	0,78079	18	1,24969	74	1,60054	59
30	0,66262	22	0,88473	52	1,33519	34	30	0,78261	18	1,25717	75	1,60639	59
40	0,66480	22	0,88992	52	1,33864	35	40	0,78442	18	1,26471	75	1,61229	59
50	0,66697	22	0,89515	53	1,34212	35	50	0,78622	18	1,27230	76	1,61825	60
42 0	0,66913	22	0,90040	53	1,34563	35	52 0	0,78801	18	1,27994	76	1,62427	60
10	0,67129	22	0,90569	53	1,34917	35	10	0,78980	18	1,28764	77	1,63035	61
20	0,67344	22	0,91099	53	1,35274	36	20	0,79158	18	1,29511	78	1,63648	61
30	0,67559	21	0,91633	53	1,35634	36	30	0,79335	18	1,30323	78	1,64268	62
40	0,67773	21	0,92170	54	1,35997	37	40	0,79512	18	1,31110	79	1,64894	63
50	0,67987	21	0,92709	54	1,36363	37	50	0,79688	18	1,31904	80	1,65526	64
43 0	0,68200	21	0,93252	55	1,36733	37	53 0	0,79864	17	1,32704	81	1,66161	64
10	0,68412	21	0,93797	55	1,37105	37	10	0,80038	17	1,33511	81	1,66809	64
20	0,68624	21	0,94345	55	1,37481	38	20	0,80212	17	1,34323	81	1,67460	65
30	0,68835	21	0,94896	55	1,37860	38	30	0,80386	17	1,35142	82	1,68117	66
40	0,69046	21	0,95451	56	1,38242	38	40	0,80558	17	1,35968	83	1,68782	67
50	0,69256	21	0,96008	56	1,38628	39	50	0,80730	17	1,36800	83	1,69452	67
44 0	0,69466	21	0,96569	56	1,39016	39	54 0	0,80902	17	1,37638	84	1,70130	68
10	0,69675	21	0,97133	57	1,39409	39	10	0,81072	17	1,38484	85	1,70815	69
20	0,69883	21	0,97700	57	1,39804	40	20	0,81242	17	1,39336	85	1,71506	69
30	0,70091	21	0,98270	57	1,40203	40	30	0,81412	17	1,40195	86	1,72205	70
40	0,70298	21	0,98843	58	1,40606	41	40	0,81580	17	1,41061	87	1,72911	71
50	0,70505	21	0,99420	58	1,41012	41	50	0,81748	17	1,41934	87	1,73621	71
45 0	0,70711	21	1,00000	58	1,41421	41	55 0	0,81915	17	1,42815	88	1,74345	72
10	0,70916	21	1,00583	59	1,41835	41	10	0,82082	17	1,43703	89	1,75073	73
20	0,71121	21	1,01170	59	1,42251	42	20	0,82248	17	1,44598	90	1,75808	74
30	0,71325	20	1,01761	59	1,42672	42	30	0,82413	17	1,45501	90	1,76552	74
40	0,71529	20	1,02355	60	1,43096	42	40	0,82577	16	1,46411	91	1,77303	75
50	0,71732	20	1,02952	60	1,43521	43	50	0,82741	16	1,47330	92	1,78062	76
46 0	0,71934	20	1,03553	61	1,43956	43	56 0	0,82904	16	1,48256	93	1,78829	77
10	0,72136	20	1,04158	61	1,44391	44	10	0,83066	16	1,49190	93	1,79601	78
20	0,72337	20	1,04766	61	1,44831	44	20	0,83228	16	1,50133	94	1,80388	78
30	0,72537	20	1,05378	62	1,45274	44	30	0,83389	16	1,51084	95	1,81180	79
40	0,72737	20	1,05994	62	1,45721	45	40	0,83549	16	1,52043	96	1,81981	80
50	0,72937	20	1,06613	62	1,46173	45	50	0,83708	16	1,53010	97	1,82790	81
47 0	0,73135	20	1,07237	63	1,46628	46	57 0	0,83867	16	1,53987	98	1,83608	82
10	0,73333	20	1,07864	63	1,47087	46	10	0,84025	16	1,54972	99	1,84435	83
20	0,73531	20	1,08496	63	1,47551	46	20	0,84182	16	1,55966	99	1,85271	84
30	0,73728	20	1,09131	64	1,48019	47	30	0,84339	16	1,56969	100	1,86116	85
40	0,73924	20	1,09770	64	1,48491	47	40	0,84495	16	1,57981	101	1,86970	85
50	0,74120	20	1,10414	65	1,48967	48	50	0,84650	16	1,59002	102	1,87834	86
48 0	0,74314	19	1,11061	65	1,49448	48	58 0	0,84805	15	1,60033	103	1,88708	87
10	0,74509	19	1,11713	66	1,49933	49	10	0,84959	15	1,61074	104	1,89591	88
20	0,74703	19	1,12369	66	1,50422	49	20	0,85112	15	1,62125	105	1,90485	89
30	0,74896	19	1,13029	67	1,50916	49	30	0,85264	15	1,63185	106	1,91388	90
40	0,75088	19	1,13694	67	1,51415	50	40	0,85416	15	1,64256	107	1,92302	91
50	0,75280	19	1,14363	67	1,51918	51	50	0,85567	15	1,65337	108	1,93226	92
49 0	0,75471	19	1,15037	68	1,52425	51	59 0	0,85717	15	1,66428	109	1,94160	93
10	0,75661	19	1,15715	68	1,52938	51	10	0,85866	15	1,67530	110	1,95106	95
20	0,75851	19	1,16398	69	1,53455	52	20	0,86015	15	1,68643	111	1,96062	96
30	0,76041	19	1,17085	69	1,53977	52	30	0,86163	15	1,69766	112	1,97029	97
40	0,76229	19	1,17777	70	1,54504	53	40	0,86310	15	1,70901	113	1,98008	98
50	0,76417	19	1,18474	70	1,55036	53	50	0,86457	15	1,72047	115	1,98998	99
50 0	0,76604	19	1,19175	70	1,55572	54	60 0	0,86603	15	1,73205	116	2,00000	100

град.	синусы.	разн. для 1'	танген.	разн. для 1'	секансы.	разн. для 1'	град.	синусы.	разн. для 1'	танген.	разн. для 1'	секансы.	разн. для 1'
60° 0'	0,86603	15	1,73203	117	2,00000	101	70° 0'	0,93969	10	2,74748	251	2,92380	236
10	0,86748	14	1,74375	118	2,01014	103	10	0,94068	10	2,77254	255	2,94737	240
20	0,86892	14	1,75556	119	2,02039	101	20	0,94167	10	2,79802	259	2,97135	244
30	0,87036	14	1,76719	121	2,03077	105	30	0,94264	10	2,82391	263	2,99574	248
40	0,87178	14	1,77955	122	2,04128	106	40	0,94361	10	2,85023	268	3,02057	253
50	0,87321	14	1,79174	123	2,05191	108	50	0,94457	10	2,87700	272	3,04584	257
61 0	0,87462	14	1,80405	124	2,06267	109	71 0	0,94552	9	2,90121	277	3,07155	262
10	0,87603	14	1,81619	126	2,07356	110	10	0,94646	9	2,93189	282	3,09774	267
20	0,87743	14	1,82906	127	2,08458	112	20	0,94740	9	2,96004	287	3,12440	272
30	0,87882	14	1,84177	129	2,09574	113	30	0,94832	9	2,98869	291	3,15155	277
40	0,88020	14	1,85462	130	2,10704	114	40	0,94924	9	3,01783	297	3,17920	282
50	0,88158	14	1,86760	131	2,11847	116	50	0,95015	9	3,04749	302	3,20737	297
62 0	0,88295	14	1,88073	133	2,13005	117	72 0	0,95106	9	3,07768	307	3,23607	292
10	0,88431	14	1,89400	134	2,14178	119	10	0,95195	9	3,10842	313	3,26531	298
20	0,88566	14	1,90741	136	2,15366	120	20	0,95284	9	3,13972	319	3,29512	304
30	0,88701	13	1,92098	137	2,16568	122	30	0,95372	9	3,17159	325	3,32551	310
40	0,88835	13	1,93470	139	2,17786	123	40	0,95459	9	3,20406	331	3,35649	316
50	0,88968	13	1,94858	140	2,19019	125	50	0,95545	9	3,23711	337	3,38808	322
63 0	0,89101	13	1,96261	142	2,20269	127	73 0	0,95630	9	3,27085	344	3,42030	329
10	0,89232	13	1,97681	143	2,21535	128	10	0,95715	8	3,30521	350	3,45317	335
20	0,89363	13	1,99116	145	2,22817	130	20	0,95799	8	3,34023	357	3,48671	342
30	0,89493	13	2,00569	147	2,24116	132	30	0,95882	8	3,37594	364	3,52094	349
40	0,89623	13	2,02039	149	2,25432	133	40	0,95964	8	3,41236	372	3,55587	357
50	0,89752	13	2,03526	151	2,26766	135	50	0,96046	8	3,44951	379	3,59151	364
64 0	0,89879	13	2,05030	152	2,28117	137	74 0	0,96126	8	3,48741	387	3,62796	372
10	0,90007	13	2,06553	154	2,29487	139	10	0,96206	8	3,52609	395	3,66515	380
20	0,90133	13	2,08094	156	2,30875	141	20	0,96285	8	3,56557	403	3,70315	388
30	0,90259	12	2,09654	158	2,32282	143	30	0,96363	8	3,60588	412	3,74198	397
40	0,90383	12	2,11233	160	2,33708	145	40	0,96440	8	3,64705	420	3,78166	406
50	0,90507	12	2,12832	162	2,35151	147	50	0,96517	8	3,68909	430	3,82223	415
65 0	0,90631	12	2,14451	164	2,36620	149	75 0	0,96593	7	3,73205	439	3,86370	424
10	0,90753	12	2,16090	166	2,38107	151	10	0,96667	7	3,77595	449	3,90613	434
20	0,90875	12	2,17749	168	2,39614	153	20	0,96742	7	3,82083	459	3,94952	444
30	0,90996	12	2,19430	170	2,41142	155	30	0,96815	7	3,86671	469	3,99393	455
40	0,91116	12	2,21132	173	2,42692	157	40	0,96887	7	3,91364	480	4,03938	465
50	0,91236	12	2,22857	175	2,44264	160	50	0,96959	7	3,96165	491	4,08591	477
66 0	0,91355	12	2,24604	177	2,45859	162	76 0	0,97030	7	4,01078	503	4,13357	488
10	0,91472	12	2,26374	179	2,47477	164	10	0,97100	7	4,06107	515	4,18238	500
20	0,91590	12	2,28167	182	2,49119	167	20	0,97169	7	4,11256	527	4,23239	513
30	0,91706	12	2,29984	184	2,50784	169	30	0,97237	7	4,16530	540	4,28366	526
40	0,91822	11	2,31826	187	2,52474	172	40	0,97304	7	4,21933	554	4,33622	539
50	0,91936	11	2,33693	189	2,54190	174	50	0,97371	7	4,27471	568	4,39012	553
67 0	0,92050	11	2,35585	192	2,55930	177	77 0	0,97437	7	4,33118	582	4,44541	568
10	0,92164	11	2,37504	195	2,57698	179	10	0,97502	6	4,38969	597	4,50216	583
20	0,92276	11	2,39449	197	2,59491	182	20	0,97566	6	4,44942	613	4,56041	598
30	0,92388	11	2,41421	200	2,61313	185	30	0,97630	6	4,51071	629	4,62023	614
40	0,92499	11	2,43422	203	2,63162	188	40	0,97692	6	4,57363	646	4,68167	632
50	0,92609	11	2,45451	206	2,65040	191	50	0,97754	6	4,63825	664	4,74482	649
68 0	0,92718	11	2,47509	209	2,66947	194	78 0	0,97815	6	4,70463	682	4,80973	668
10	0,92827	11	2,49597	212	2,68884	197	10	0,97875	6	4,77286	701	4,87649	687
20	0,92935	11	2,51715	215	2,70851	200	20	0,97934	6	4,84300	722	4,94517	707
30	0,93042	11	2,53865	218	2,72850	203	30	0,97992	6	4,91516	742	5,01585	728
40	0,93148	11	2,56046	222	2,74881	206	40	0,98050	6	4,98910	764	5,08863	750
50	0,93253	11	2,58261	225	2,76945	210	50	0,98107	6	5,06584	787	5,16359	773
69 0	0,93358	10	2,60509	228	2,79013	213	79 0	0,98163	6	5,14455	811	5,24084	797
10	0,93462	10	2,62791	232	2,81175	217	10	0,98218	5	5,22566	836	5,32049	821
20	0,93565	10	2,65109	235	2,83342	220	20	0,98272	5	5,30928	862	5,40263	848
30	0,93667	10	2,67462	239	2,85515	224	30	0,98325	5	5,39552	890	5,48740	875
40	0,93769	10	2,69853	243	2,87785	228	40	0,98378	5	5,48451	919	5,57493	904
50	0,93869	10	2,72281	247	2,90063	232	50	0,98430	5	5,57638	949	5,66533	934
70 0	0,93969		2,74748		2,92380		80 0	0,98481		5,67128		5,75877	

Продолжение.

Градусы.	Синусы.	Разн. для 1'	Тангенсы.	Разность для 1'	Секансы.	Разность для 1'
80°. 0'	0,98481	5	5,67128	981	5,75877	966
10	0,98531	5	5,76937	1014	5,85539	1000
20	0,98580	5	5,87080	1050	5,95536	1035
30	0,98629	5	5,97576	1087	6,05886	1072
40	0,98676	5	6,08444	1126	6,16607	1111
50	0,98723	5	6,19703	1167	6,27719	1153
81. 0	0,98769	5	6,31375	1211	6,39245	1196
10	0,98814	4	6,43484	1257	6,51208	1243
20	0,98858	4	6,56055	1306	6,63633	1291
30	0,98902	4	6,69116	1358	6,76547	1343
40	0,98944	4	6,82694	1413	6,89979	1398
50	0,98986	4	6,96823	1471	7,03962	1457
82. 0	0,99027	4	7,11537	1534	7,18530	1519
10	0,99067	4	7,26873	1600	7,33719	1585
20	0,99106	4	7,42871	1670	7,49571	1656
30	0,99144	4	7,59575	1746	7,66130	1731
40	0,99182	4	7,77035	1827	7,83443	1812
50	0,99219	4	7,95302	1913	8,01565	1899
83. 0	0,99255	4	8,14435	2006	8,20551	1992
10	0,99290	3	8,34496	2106	8,40466	2091
20	0,99324	3	8,55555	2213	8,61379	2199
30	0,99357	3	8,77689	2329	8,83367	2315
40	0,99390	3	9,00983	2455	9,06515	2440
50	0,99421	3	9,25530	2591	9,30917	2576
84. 0	0,99452	3	9,51436	2738	9,56677	2724
10	0,99482	3	9,78817	2899	9,83912	2884
20	0,99511	3	10,07803	3074	10,12752	3059
30	0,99540	3	10,38540	3264	10,43343	3251
40	0,99567	3	10,71191	3475	10,75849	3461
50	0,99594	3	11,05943	3706	11,10455	3692
85. 0	0,99619	3	11,43005	3961	11,47371	3947
10	0,99644	2	11,82617	4243	11,86837	4229
20	0,99668	2	12,25051	4557	12,29125	4542
30	0,99692	2	12,70620	4907	12,74549	4892
40	0,99714	2	13,19688	5309	13,23472	5284
50	0,99736	2	13,72674	5739	13,76311	5725
86. 0	0,99756	2	14,30067	6238	14,33559	6223
10	0,99776	2	14,92442	6804	14,95788	6789
20	0,99795	2	15,60478	7451	15,63679	7436
30	0,99813	2	16,34986	8195	16,38041	8180
40	0,99831	2	17,16934	9056	17,19843	9042
50	0,99847	2	18,07498	10062	18,10262	10047
87. 0	0,99863	2	19,08114	11244	19,10732	11230
10	0,99878	1	20,20555	12649	20,23028	12634
20	0,99892	1	21,47040	14334	21,49368	14319
30	0,99905	1	22,90377	16380	22,92559	16365
40	0,99917	1	24,54176	18898	24,56212	18884
50	0,99929	1	26,43160	22047	26,45051	22032
88. 0	0,99939	1	28,63625	26053	28,65371	26039
10	0,99949	1	31,24158	31262	31,25758	31247
20	0,99958	1	34,36777	38207	34,38232	38192
30	0,99966	1	38,18846	47756	38,20155	47742
40	0,99973	1	42,96408	61398	42,97571	61384
50	0,99979	1	49,10388	81861	49,11406	81846
89. 0	0,99985		57,28996	1,14601	57,29869	1,14587
10	0,99989		68,75009	1,71897	68,75736	1,71883
20	0,99993		85,93979	2,86489	85,94561	2,86474
30	0,99996		114,58865	5,72968	114,59301	5,72953
40	0,99998		171,88540	17,18883	171,88831	17,18869
50	1,00000		343,77371		343,77516	
90. 0	1,00000		∞		∞	

Для сысканія прих. восход.) ж. ш. п. на каждой часъ для сысканія часовой скорости) на каждой часъ

t. 12 ^ч .	Log. B.	Log. C.	Log. D.	Log. E.	Log. F.	t. 12 ^ч .	Log. C'.	Log. D'.	Log. E'.	Log. F'.
0. 0	— ∞	— ∞	— ∞	— ∞	— ∞	0. 0	9,69897 n	8,92082	8,92082	7,92082 n
5	7,8416375	7,53758 n	6,75336	6,76092	5,75185 n	5	9,69290 n	8,90247	8,91773	7,90547 n
10	8,1426675	7,83556 n	7,04518	7,06038	6,04814 n	10	9,68674 n	8,88358	8,91449	7,88957 n
15	8,3187588	8,00859 n	7,21195	7,23484	6,21636 n	15	9,68049 n	8,86412	8,91111	7,87309 n
20	8,4436975	8,13043 n	7,23746	7,35811	6,33328 n	20	9,67415 n	8,84404	8,90757	7,85598 n
25	8,5406075	8,22423 n	7,41482	7,45330	6,42204 n	25	9,66771 n	8,82331	8,90388	7,83822 n
30	8,6197888	8,30028 n	7,48434	7,53071	6,49292 n	30	9,66118 n	8,80187	8,90003	7,81975 n
35	8,6867355	8,36406 n	7,54149	7,59584	6,55142 n	35	9,65455 n	8,77966	8,89603	7,80053 n
40	8,7447275	8,41887 n	7,58957	7,65197	6,60082 n	40	9,64782 n	8,75663	8,89188	7,78049 n
45	8,7958800	8,46682 n	7,63068	7,70121	6,64322 n	45	9,64098 n	8,73269	8,88756	7,75958 n
50	8,8416375	8,50935 n	7,66626	7,74501	6,68007 n	50	9,63403 n	8,70776	8,88307	7,73773 n
55	8,8830302	8,54749 n	7,69734	7,78439	6,71239 n	55	9,62697 n	8,68175	8,87842	7,71485 n
1. 0	8,9208188	8,58200 n	7,72467	7,82013	6,74095 n	1. 0	9,61979 n	8,65455	8,87361	7,69085 n
5	8,9555809	8,61346 n	7,74883	7,85279	6,76631 n	5	9,61249 n	8,62603	8,86862	7,66561 n
10	8,9877655	8,64232 n	7,77026	7,88282	6,78891 n	10	9,60507 n	8,59603	8,86345	7,63901 n
15	9,0177288	8,66893 n	7,78932	7,91058	6,80912 n	15	9,59751 n	8,56437	8,85811	7,61091 n
20	9,0457575	8,69358 n	7,80628	7,93636	6,82721 n	20	9,58983 n	8,53085	8,85258	7,58111 n
25	9,0720864	8,71650 n	7,82138	7,96036	6,84342 n	25	9,58200 n	8,49519	8,84686	7,54942 n
30	9,0969100	8,73789 n	7,83480	7,98286	6,85792 n	30	9,57403 n	8,45706	8,84096	7,51555 n
35	9,1203911	8,75791 n	7,84670	8,00394	6,87089 n	35	9,56591 n	8,41607	8,83486	7,47921 n
40	9,1426675	8,77670 n	7,85722	8,02377	6,88244 n	40	9,55764 n	8,37169	8,82855	7,43997 n
45	9,1638568	8,79437 n	7,86646	8,04246	6,89270 n	45	9,54921 n	8,32326	8,82204	7,39734 n
50	9,1840602	8,81103 n	7,87451	8,06011	6,90175 n	50	9,54061 n	8,26986	8,81532	7,35065 n
55	9,2033653	8,82676 n	7,88147	8,07681	6,90968 n	55	9,53183 n	8,21026	8,80838	7,29900 n
2. 0	9,2218487	8,84164 n	7,88739	8,09264	6,91655 n	2. 0	9,52288 n	8,14267	8,80121	7,24118 n
5	9,2395775	8,85573 n	7,89235	8,10766	6,92243 n	5	9,51374 n	8,06439	8,79381	7,17544 n
10	9,2566109	8,86910 n	7,89637	8,12194	6,92737 n	10	9,50440 n	7,97108	8,78617	7,09913 n
15	9,2730013	8,88179 n	7,89952	8,13553	6,93141 n	15	9,49485 n	7,85500	8,77828	7,00803 n
20	9,2887955	8,89386 n	7,90183	8,14846	6,93458 n	20	9,48509 n	7,70031	8,77014	6,89463 n
25	9,3040355	8,90534 n	7,90333	8,16078	6,93692 n	25	9,47511 n	7,46503	8,76172	6,74370 n
30	9,3187588	8,91627 n	7,90404	8,17253	6,93845 n	30	9,46483 n	6,93855	8,75304	6,51562 n
35	9,3329992	8,92669 n	7,90399	8,18375	6,93920 n	35	9,45442 n	7,05434 n	8,74406	6,02262 n
40	9,3467875	8,93661 n	7,90319	8,19446	6,93919 n	40	9,44370 n	7,48946 n	8,73478	6,05324
45	9,3601514	8,94608 n	7,90166	8,20469	6,93842 n	45	9,43270 n	7,69822 n	8,72520	6,51490
50	9,3731164	8,95512 n	7,89942	8,21446	6,93692 n	50	9,42142 n	7,83556 n	8,71529	6,73015
55	9,3857055	8,96374 n	7,89646	8,22381	6,93468 n	55	9,40984 n	7,93734 n	8,70503	6,87089
3. 0	9,3979400	8,97197 n	7,89279	8,23274	6,93171 n	3. 0	9,39794 n	8,01773 n	8,69442	6,97498
5	9,4098392	8,97983 n	7,88841	8,24128	6,92801 n	5	9,38571 n	8,08381 n	8,68344	7,05716
10	9,4214211	8,98733 n	7,88333	8,24944	6,92359 n	10	9,37312 n	8,13964 n	8,67206	7,12474
15	9,4327021	8,99450 n	7,87753	8,25724	6,91842 n	15	9,36015 n	8,18775 n	8,66027	7,18187
20	9,4436975	9,00134 n	7,87100	8,26470	6,91252 n	20	9,34679 n	8,22982 n	8,64804	7,23114
25	9,4544214	9,00787 n	7,86374	8,27183	6,90586 n	25	9,33300 n	8,26704 n	8,63535	7,27426
30	9,4648868	9,01409 n	7,85573	8,27864	6,89843 n	30	9,31876 n	8,30028 n	8,62217	7,31246
35	9,4751060	9,02003 n	7,84695	8,28514	6,89020 n	35	9,30404 n	8,33017 n	8,60847	7,34659
40	9,4850992	9,02570 n	7,83737	8,29134	6,88116 n	40	9,28880 n	8,35722 n	8,59422	7,37731
45	9,4948500	9,03109 n	7,82697	8,29725	6,87129 n	45	9,27300 n	8,38181 n	8,57937	7,40513
50	9,5043933	9,03623 n	7,81572	8,30289	6,86053 n	50	9,25661 n	8,40426 n	8,56389	7,43044
55	9,5137156	9,04111 n	7,80357	8,30826	6,84887 n	55	9,23958 n	8,42482 n	8,54774	7,45356
4. 0	9,5228187	9,04576 n	7,79048	8,31336	6,83624 n	4. 0	9,22185 n	8,44370 n	8,53085	7,47473
5	9,5318336	9,05016 n	7,77641	8,31821	6,82261 n	5	9,20337 n	8,46106 n	8,51317	7,49418
10	9,5406075	9,05434 n	7,76128	8,32282	6,80791 n	10	9,18406 n	8,47707 n	8,49463	7,51207
15	9,5492077	9,05830 n	7,74503	8,32718	6,79206 n	15	9,16386 n	8,49182 n	8,47516	7,52855
20	9,5576409	9,06204 n	7,72758	8,33130	6,77500 n	20	9,14267 n	8,50544 n	8,45467	7,54374
25	9,5659134	9,06556 n	7,70883	8,33519	6,75661 n	25	9,12039 n	8,51801 n	8,43306	7,55775
30	9,5740113	9,06888 n	7,68867	8,33886	6,73680 n	30	9,09691 n	8,52961 n	8,41021	7,57067
35	9,5820102	9,07200 n	7,66696	8,34230	6,71542 n	35	9,07209 n	8,54031 n	8,38598	7,58258
40	9,5898255	9,07492 n	7,64355	8,34553	6,69232 n	40	9,04576 n	8,55015 n	8,36021	7,59353
45	9,5975124	9,07764 n	7,61825	8,34854	6,66730 n	45	9,01773 n	8,55920 n	8,33270	7,60360
50	9,6051655	9,08017 n	7,59082	8,35134	6,64014 n	50	8,98777 n	8,56750 n	8,30323	7,61283
55	9,6124895	9,08252 n	7,56098	8,35394	6,61055 n	55	8,95558 n	8,57509 n	8,27150	7,62127
5. 0	9,6197887	9,08468 n	7,52837	8,35633	6,57818 n	5. 0	8,92082 n	8,58200 n	8,25216	7,62895

Продолженіе.

Продолженіе.

t. 12 ²	Log. B.	Log. C.	Log. D.	Log. E.	Log. F.
5. 0	9,6197887	9,08468 n	7,52837	8,35633	6,57818 n
5	9,6269674	9,08665 n	7,49256	8,35853	6,54259 n
10	9,6340292	9,0845 n	7,45297	8,36052	6,50319 n
15	9,6409781	9,09007 n	7,40883	8,36232	6,45923 n
20	9,6478175	9,09152 n	7,35912	8,36392	6,40968 n
25	9,6545509	9,09279 n	7,30240	8,36533	6,35310 n
30	9,6611814	9,09388 n	7,23655	8,36655	6,28737 n
35	9,6677123	9,09481 n	7,15830	8,36758	6,20922 n
40	9,6741464	9,09557 n	7,06214	8,36842	6,11315 n
45	9,6804866	9,09616 n	6,93779	8,36907	5,98886 n
50	9,6867355	9,09657 n	6,76212	8,36954	5,81324 n
55	9,6928959	9,09683 n	6,46134	8,36982	5,51249 n
6. 0	9,6989700	9,09691 n	— ∞	8,36991	— ∞
5	9,7049604	9,09683 n	6,46134 n	8,36982	5,51249
10	9,7108692	9,09557 n	6,76212 n	8,36954	5,81324
15	9,7166988	9,09616 n	6,93779 n	8,36907	5,98886
20	9,7224511	9,09557 n	7,06214 n	8,36842	6,11315
25	9,7281282	9,09481 n	7,15830 n	8,36758	6,20922
30	9,7337321	9,09388 n	7,23655 n	8,36655	6,28737
35	9,7392646	9,09279 n	7,30240 n	8,36533	6,35310
40	9,7447275	9,09152 n	7,35912 n	8,36392	6,40968
45	9,7501225	9,09007 n	7,40883 n	8,36232	6,45923
50	9,7554514	9,08845 n	7,45297 n	8,36052	6,50319
55	9,7607156	9,08665 n	7,49256 n	8,35853	6,54259
7. 0	9,7659167	9,08468 n	7,52837 n	8,35633	6,57818
5	9,7710564	9,08252 n	7,56098 n	8,35394	6,61055
10	9,7761360	9,08017 n	7,59082 n	8,35134	6,64014
15	9,7811568	9,07764 n	7,61825 n	8,34854	6,66730
20	9,7861202	9,07492 n	7,64355 n	8,34553	6,69232
25	9,7910275	9,07200 n	7,66696 n	8,34230	6,71542
30	9,7958800	9,06888 n	7,68867 n	8,33886	6,73680
35	9,8006789	9,06556 n	7,70883 n	8,33519	6,75661
40	9,8054253	9,06204 n	7,72758 n	8,33130	6,77500
45	9,8101205	9,05830 n	7,74503 n	8,32718	6,79206
50	9,8147654	9,05434 n	7,76128 n	8,32282	6,80791
55	9,8193611	9,05016 n	7,77641 n	8,31821	6,82261
8. 0	9,8239037	9,04576 n	7,79048 n	8,31336	6,83624
5	9,8284032	9,04111 n	7,80357 n	8,30826	6,84887
10	9,8328636	9,03623 n	7,81572 n	8,30289	6,86053
15	9,8372727	9,03109 n	7,82697 n	8,29725	6,87129
20	9,8416375	9,02570 n	7,83737 n	8,29134	6,88116
25	9,8459559	9,02003 n	7,84695 n	8,28514	6,89020
30	9,8502377	9,01409 n	7,85573 n	8,27864	6,89843
35	9,8544747	9,00787 n	7,86374 n	8,27183	6,90586
40	9,8586709	9,00134 n	7,87100 n	8,26470	6,91252
45	9,8628268	8,99450 n	7,87753 n	8,25724	6,91842
50	9,8669434	8,98733 n	7,88333 n	8,24944	6,92359
55	9,8710213	8,97983 n	7,88841 n	8,24128	6,92801
9. 0	9,8750612	8,97197 n	7,89279 n	8,23274	6,93171
5	9,8790640	8,96374 n	7,89646 n	8,22381	6,93468
10	9,8830302	8,95512 n	7,89942 n	8,21446	6,93692
15	9,8869600	8,94608 n	7,90166 n	8,20469	6,93842
20	9,8908555	8,93661 n	7,90319 n	8,19446	6,93919
25	9,8947160	8,92669 n	7,90396 n	8,18375	6,93920
30	9,8985424	8,91627 n	7,90404 n	8,17253	6,93845
35	9,9023551	8,90534 n	7,90333 n	8,16078	6,93692
40	9,9060955	8,89386 n	7,90183 n	8,14846	6,93458
45	9,9098234	8,88179 n	7,89952 n	8,13553	6,93141
50	9,9135195	8,86910 n	7,89637 n	8,12194	6,92737
55	9,9171845	8,85573 n	7,89235 n	8,10766	6,92243
10. 0	9,9208187	8,84164 n	7,88739 n	8,09264	6,91655

t. 12 ²	Log. C.	Log. D.	Log. E.	Log. F.
5. 0	8,92082 n	8,58200 n	8,23716	7,62895
5	8,88303 n	8,58826 n	8,19976	7,63591
10	8,84164 n	8,59390 n	8,15872	7,64217
15	8,79588 n	8,59894 n	8,11328	7,64777
20	8,74473 n	8,60340 n	8,06241	7,65273
25	8,68674 n	8,60730 n	8,00467	7,65706
30	8,61979 n	8,61065 n	7,93794	7,66078
35	8,54061 n	8,61346 n	7,85895	7,66391
40	8,44370 n	8,61575 n	7,76219	7,66645
45	8,31876 n	8,61752 n	7,63737	7,66842
50	8,14267 n	8,61878 n	7,46136	7,66982
55	7,84164 n	8,61954 n	7,16038	7,67066
6. 0	— ∞	8,61979 n	— ∞	7,67094
5	7,84164	8,61954 n	7,16038 n	7,67066
10	8,14267	8,61878 n	7,46136 n	7,66982
15	8,31876	8,61752 n	7,63737 n	7,66842
20	8,44370	8,61575 n	7,76219 n	7,66645
25	8,54031	8,61346 n	7,85895 n	7,66391
30	8,61979	8,61065 n	7,93794 n	7,66078
35	8,68674	8,60730 n	8,00467 n	7,65706
40	8,74473	8,60340 n	8,06241 n	7,65273
45	8,79588	8,59894 n	8,11328 n	7,64777
50	8,84164	8,59390 n	8,15872 n	7,64217
55	8,88303	8,58826 n	8,19976 n	7,63591
7. 0	8,92082	8,58200 n	8,23716 n	7,62895
5	8,95558	8,57509 n	8,27150 n	7,62127
10	8,98777	8,56750 n	8,30323 n	7,61283
15	9,01773	8,55920 n	8,33270 n	7,60360
20	9,04576	8,55015 n	8,36021 n	7,59353
25	9,07209	8,54031 n	8,38598 n	7,58258
30	9,09691	8,52961 n	8,41021 n	7,57067
35	9,12039	8,51801 n	8,43306 n	7,55775
40	9,14267	8,50544 n	8,45467 n	7,54374
45	9,16386	8,49182 n	8,47516 n	7,52855
50	9,18406	8,47707 n	8,49463 n	7,51207
55	9,20337	8,46106 n	8,51317 n	7,49418
8. 0	9,22185	8,44370 n	8,53085 n	7,47473
5	9,23958	8,42482 n	8,54774 n	7,45356
10	9,25661	8,40426 n	8,56389 n	7,43014
15	9,27300	8,38181 n	8,57937 n	7,40513
20	9,28880	8,35722 n	8,59422 n	7,37731
25	9,30404	8,33017 n	8,60847 n	7,34659
30	9,31876	8,30028 n	8,62217 n	7,31246
35	9,33300	8,26704 n	8,63535 n	7,27426
40	9,34679	8,22982 n	8,64804 n	7,23114
45	9,36015	8,18775 n	8,66027 n	7,18187
50	9,37312	8,13964 n	8,67206 n	7,12474
55	9,38571	8,08381 n	8,68344 n	7,05716
9. 0	9,39794	8,01773 n	8,69442 n	6,97498
5	9,40984	7,93734 n	8,70503 n	6,87089
10	9,42142	7,83556 n	8,71529 n	6,73015
15	9,43270	7,69822 n	8,72520 n	6,51490
20	9,44370	7,48946 n	8,73478 n	6,05324
25	9,45442	7,05434 n	8,74403 n	6,02262 n
30	9,46489	6,93855	8,75304 n	6,51562 n
35	9,47511	7,46503	8,76172 n	6,74370 n
40	9,48509	7,70031	8,77014 n	6,89463 n
45	9,49485	7,85500	8,77828 n	7,00803 n
50	9,50440	7,97168	8,78617 n	7,09913 n
55	9,51374	8,06439	8,79381 n	7,17544 n
10. 0	9,52288	8,14267	8,80121 n	7,24118 n

t. 12 ⁿ	Log. B.	Log. C.	Log. D.	Log. E.	Log. F.	t. 12. ⁿ	Log. C'.	Log. D'.	Log. E'.	Log. F'.
ч. 1						ч. 1				
10. 0	9,9208187	8,84164 n	7,88739 n	8,09264	6,91655	10. 0	9,52288	8,14267	8,80121 n	7,24118 n
5	9,9244229	8,82676 n	7,88147 n	8,07681	6,90968	5	9,53183	8,21026	8,80838 n	7,29900 n
10	9,9279973	8,81103 n	7,87451 n	8,06011	6,90175	10	9,54061	8,26986	8,81532 n	7,35065 n
15	9,9315426	8,79437 n	7,86646 n	8,04246	6,89270	15	9,54921	8,32326	8,82204 n	7,39734 n
20	9,9350592	8,77670 n	7,85722 n	8,02377	6,88244	20	9,55764	8,37169	8,82855 n	7,43997 n
25	9,9385475	8,75791 n	7,84670 n	8,00394	6,87089	25	9,56591	8,41607	8,83486 n	7,47921 n
30	9,9420080	8,73789 n	7,83480 n	7,98286	6,85792	30	9,57403	8,45706	8,84096 n	7,51555 n
35	9,9454412	8,71650 n	7,82138 n	7,96039	6,84342	35	9,58200	8,49519	8,84686 n	7,54942 n
40	9,9488475	8,69358 n	7,80628 n	7,93636	6,82721	40	9,58983	8,53085	8,85258 n	7,58111 n
45	9,9522272	8,66893 n	7,78932 n	7,91058	6,80912	45	9,59751	8,56437	8,85811 n	7,61091 n
50	9,9555809	8,64232 n	7,77026 n	7,88282	6,78891	50	9,60507	8,59603	8,86345 n	7,63901 n
55	9,9589088	8,61346 n	7,74883 n	7,85279	6,76631	55	9,61249	8,62603	8,86862 n	7,66561 n
11. 0	9,9622115	8,58200 n	7,72467 n	7,82013	6,74095	11. 0	9,61979	8,65455	8,87361 n	7,69085 n
5	9,9654892	8,54749 n	7,69734 n	7,78439	6,71239	5	9,62697	8,68175	8,87842 n	7,71485 n
10	9,9687423	8,50935 n	7,66626 n	7,74501	6,68007	10	9,63403	8,70776	8,88307 n	7,73773 n
15	9,9719713	8,46682 n	7,63068 n	7,70121	6,64322	15	9,64098	8,73269	8,88756 n	7,75958 n
20	9,9751764	8,41887 n	7,58957 n	7,65197	6,60082	20	9,64782	8,75663	8,89188 n	7,78049 n
25	9,9783581	8,36406 n	7,54149 n	7,59584	6,55142	25	9,65455	8,77966	8,89603 n	7,80053 n
30	9,9815166	8,30028 n	7,48434 n	7,53071	6,49292	30	9,66118	8,80187	8,90003 n	7,81975 n
35	9,9846523	8,22423 n	7,41482 n	7,45330	6,42204	35	9,66771	8,82331	8,90388 n	7,83822 n
40	9,9877655	8,13043 n	7,32746 n	7,35811	6,33328	40	9,67415	8,84404	8,90757 n	7,85598 n
45	9,9908566	8,00859 n	7,21195 n	7,23484	6,21636	45	9,68049	8,86412	8,91111 n	7,87309 n
50	9,9939258	7,83556 n	7,04518 n	7,06038	6,04814	50	9,68674	8,88358	8,91449 n	7,88957 n
55	9,9969736	7,53758 n	6,75336 n	6,76092	5,75485	55	9,69290	8,90247	8,91773 n	7,90547 n
12. 0	0,0000000	— ∞	— ∞	— ∞	— ∞	12. 0	9,69897	8,92082	8,92082 n	7,92082 n
n означаетъ знакъ отрицательное A (t) = A (o) + Bb + Cc + Dd + Ee + Ff						n означаетъ знакъ отрицательное 12 h = b + C'c + D'd + E'e + F'f				

Квадраты всѣхъ чиселъ отъ 1 до 1000.

Числ.	квадратъ	Числ.	квадратъ	Числ.	квадратъ	Числ.	квадратъ	число	квадратъ	число	квадратъ	число	квадратъ
1	1	61	3721	121	14641	181	32761	241	58081	301	90601	361	130321
2	4	62	3844	122	14884	182	33124	242	58564	302	91204	362	131044
3	9	63	3969	123	15129	183	33489	243	59049	303	91809	363	131769
4	16	64	4096	124	15376	184	33856	244	59536	304	92416	364	132496
5	25	65	4225	125	15625	185	34225	245	60025	305	93025	365	133225
6	36	66	4356	126	15876	186	34596	246	60516	306	93636	366	133956
7	49	67	4489	127	16129	187	34969	247	61009	307	94249	367	134689
8	64	68	4624	128	16384	188	35344	248	61504	308	94864	368	135424
9	81	69	4761	129	16641	189	35721	249	62001	309	95481	369	136161
10	100	70	4900	130	16900	190	36100	250	62500	310	96100	370	136900
11	121	71	5041	131	17161	191	36481	251	63001	311	96721	371	137641
12	144	72	5184	132	17424	192	36864	252	63504	312	97344	372	138384
13	169	73	5329	133	17689	193	37249	253	64009	313	97969	373	139129
14	196	74	5476	134	17956	194	37636	254	64516	314	98596	374	139876
15	225	75	5625	135	18225	195	38025	255	65025	315	99225	375	140625
16	256	76	5776	136	18496	196	38416	256	65536	316	99856	376	141376
17	289	77	5929	137	18769	197	38809	257	66049	317	100489	377	142129
18	324	78	6084	138	19044	198	39204	258	66564	318	101124	378	142884
19	361	79	6241	139	19321	199	39601	259	67081	319	101761	379	143641
20	400	80	6400	140	19600	200	40000	260	67600	320	102400	380	144400
21	441	81	6561	141	19881	201	40401	261	68121	321	103041	381	145161
22	484	82	6724	142	20164	202	40804	262	68644	322	103684	382	145924
23	529	83	6889	143	20449	203	41209	263	69169	323	104329	383	146689
24	576	84	7056	144	20736	204	41616	264	69696	324	104976	384	147456
25	625	85	7225	145	21025	205	42025	265	70225	325	105625	385	148225
26	676	86	7396	146	21316	206	42436	266	70756	326	106276	386	148996
27	729	87	7569	147	21609	207	42849	267	71289	327	106929	387	149769
28	784	88	7744	148	21904	208	43264	268	71824	328	107584	388	150544
29	841	89	7921	149	22201	209	43681	269	72361	329	108241	389	151321
30	900	90	8100	150	22500	210	44100	270	72900	330	108900	390	152100
31	961	91	8281	151	22801	211	44521	271	73441	331	109561	391	152881
32	1024	92	8464	152	23104	212	44944	272	73984	332	110224	392	153664
33	1089	93	8649	153	23409	213	45369	273	74529	333	110889	393	154449
34	1156	94	8836	154	23716	214	45796	274	75076	334	111556	394	155236
35	1225	95	9025	155	24025	215	46225	275	75625	335	112225	395	156025
36	1296	96	9216	156	24336	216	46656	276	76176	336	112896	396	156816
37	1369	97	9409	157	24649	217	47089	277	76729	337	113569	397	157609
38	1444	98	9604	158	24964	218	47524	278	77284	338	114244	398	158404
39	1521	99	9801	159	25281	219	47961	279	77841	339	114921	399	159201
40	1600	100	10000	160	25600	220	48400	280	78400	340	115600	400	160000
41	1681	101	10201	161	25921	221	48841	281	78961	341	116281	401	160801
42	1764	102	10404	162	26244	222	49284	282	79524	342	116964	402	161604
43	1849	103	10609	163	26569	223	49729	283	80089	343	117649	403	162409
44	1936	104	10816	164	26896	224	50176	284	80656	344	118336	404	163216
45	2025	105	11025	165	27225	225	50625	285	81225	345	119025	405	164025
46	2116	106	11236	166	27556	226	51076	286	81796	346	119716	406	164836
47	2209	107	11449	167	27889	227	51529	287	82369	347	120409	407	165649
48	2304	108	11664	168	28224	228	51984	288	82944	348	121104	408	166464
49	2401	109	11881	169	28561	229	52441	289	83521	349	121801	409	167281
50	2500	110	12100	170	28900	230	52900	290	84100	350	122500	410	168100
51	2601	111	12321	171	29241	231	53361	291	84681	351	123201	411	168921
52	2704	112	12544	172	29584	232	53824	292	85264	352	123904	412	169744
53	2809	113	12769	173	29929	233	54289	293	85849	353	124609	413	170569
54	2916	114	12996	174	30276	234	54756	294	86436	354	125316	414	171396
55	3025	115	13225	175	30625	235	55225	295	87025	355	126025	415	172225
56	3136	116	13456	176	30976	236	55696	296	87616	356	126736	416	173056
57	3249	117	13689	177	31329	237	56169	297	88209	357	127449	417	173889
58	3364	118	13924	178	31684	238	56644	298	88804	358	128164	418	174724
59	3481	119	14161	179	32041	239	57121	299	89401	359	128881	419	175561
60	3600	120	14400	180	32400	240	57600	300	90000	360	129600	420	176400

Продолженіе.

число	квадрат	число	квадрат	число	квадрат	число	квадрат	число	квадрат	число	квадрат	число	квадрат
421	177241	481	231361	541	292681	601	361201	661	436921	721	519841	781	609961
422	178084	482	232324	542	293764	602	362404	662	438244	722	521284	782	611524
423	178929	483	233289	543	294849	603	363609	663	439569	723	522729	783	613089
424	179776	484	234256	544	295936	604	364816	664	440896	724	524176	784	614656
425	180625	485	235225	545	297025	605	366025	665	442225	725	525625	785	616225
426	181476	486	236196	546	298116	606	367236	666	443556	726	527076	786	617796
427	182329	487	237169	547	299209	607	368449	667	444889	727	528529	787	619369
428	183184	488	238144	548	300304	608	369664	668	446224	728	529984	788	620944
429	184041	489	239121	549	301401	609	370881	669	447561	729	531411	789	622521
430	184900	490	240100	550	302500	610	372100	670	448900	730	532900	790	624100
431	185761	491	241081	551	303601	611	373321	671	450241	731	534361	791	625681
432	186624	492	242064	552	304704	612	374544	672	451584	732	535824	792	627264
433	187489	493	243049	553	305809	613	375769	673	452929	733	537289	793	628849
434	188356	494	244036	554	306916	614	376996	674	454276	734	538756	794	630436
435	189225	495	245025	555	308025	615	378225	675	455625	735	540225	795	632025
436	190096	496	246016	556	309136	616	379456	676	456976	736	541696	796	633616
437	190969	497	247009	557	310249	617	380689	677	458329	737	543169	797	635209
438	191844	498	248004	558	311364	618	381924	678	459684	738	544644	798	636804
439	192721	499	249001	559	312481	619	383161	679	461041	739	546121	799	638401
440	193600	500	250000	560	313600	620	384400	680	462400	740	547600	800	640000
441	194481	501	251001	561	314721	621	385641	681	463761	741	549081	801	641601
442	195364	502	252004	562	315844	622	386884	682	465124	742	550564	802	643204
443	196249	503	253009	563	316969	623	388129	683	466489	743	552049	803	644809
444	197136	504	254016	564	318096	624	389376	684	467856	744	553536	804	646416
445	198025	505	255025	565	319225	625	390625	685	469225	745	555025	805	648025
446	198916	506	256036	566	320356	626	391876	686	470596	746	556516	806	649636
447	199809	507	257049	567	321489	627	393129	687	471969	747	558009	807	651249
448	200704	508	258064	568	322624	628	394384	688	473344	748	559504	808	652864
449	201601	509	259081	569	323761	629	395641	689	474721	749	561001	809	654481
450	202500	510	260100	570	324900	630	396900	690	476100	750	562500	810	656100
451	203401	511	261121	571	326041	631	398161	691	477481	751	564001	811	657721
452	204304	512	262144	572	327184	632	399424	692	478864	752	565504	812	659344
453	205209	513	263169	573	328329	633	400689	693	480249	753	567009	813	660969
454	206116	514	264196	574	329476	634	401956	694	481636	754	568516	814	662596
455	207025	515	265225	575	330625	635	403225	695	483025	755	570025	815	664225
456	207936	516	266256	576	331776	636	404496	696	484416	756	571536	816	665856
457	208849	517	267289	577	332929	637	405769	697	485809	757	573049	817	667489
458	209764	518	268324	578	334084	638	407044	698	487204	758	574564	818	669124
459	210681	519	269361	579	335241	639	408321	699	488601	759	576081	819	670761
460	211600	520	270400	580	336400	640	409600	700	490000	760	577600	820	672400
461	212521	521	271441	581	337561	641	410881	701	491401	761	579121	821	674041
462	213444	522	272484	582	338724	642	412164	702	492804	762	580644	822	675684
463	214369	523	273529	583	339889	643	413449	703	494209	763	582169	823	677329
464	215296	524	274576	584	341056	644	414736	704	495616	764	583696	824	678976
465	216225	525	275625	585	342225	645	416025	705	497025	765	585225	825	680625
466	217156	526	276676	586	343396	646	417316	706	498436	766	586756	826	682276
467	218089	527	277729	587	344569	647	418609	707	499849	767	588289	827	683929
468	219024	528	278784	588	345744	648	419901	708	501264	768	589821	828	685584
469	219961	529	279841	589	346921	649	421201	709	502681	769	591361	829	687241
470	220900	530	280900	590	348100	650	422500	710	504100	770	592900	830	688900
471	221841	531	281961	591	349281	651	423801	711	505521	771	594441	831	690561
472	222784	532	283024	592	350464	652	425104	712	506944	772	595984	832	692224
473	223729	533	284089	593	351649	653	426409	713	508369	773	597529	833	693889
474	224676	534	285156	594	352836	654	427716	714	509796	774	599076	834	695556
475	225625	535	286225	595	354025	655	429025	715	511225	775	600625	835	697225
476	226576	536	287296	596	355216	656	430336	716	512656	776	602176	836	698896
477	227529	537	288369	597	356409	657	431649	717	514089	777	603729	837	700569
478	228484	538	289444	598	357604	658	432964	718	515524	778	605284	838	702244
479	229441	539	290521	599	358801	659	434281	719	516961	779	606841	839	703921
480	230400	540	291600	600	360000	660	435600	720	518400	780	608400	840	705600

Продолженіе.

число	квадрат	число	квадрат	число	квадрат	число	квадрат	число	квадрат	число	квадрат	число	квадрат
841	707281	864	746496	887	786769	910	828100	933	870489	956	913936	979	958441
842	708964	865	748225	888	788544	911	829921	934	872356	957	915849	980	960400
843	710649	866	749956	889	790321	912	831744	935	874225	958	917764	981	962361
844	712336	867	751689	890	792100	913	833569	936	876096	959	919681	982	964324
845	714025	868	753424	891	793881	914	835396	937	877969	960	921600	983	966289
846	715716	869	755161	892	795664	915	837225	938	879844	961	923521	984	968256
847	717409	870	756900	893	797449	916	839056	939	881721	962	925444	985	970225
848	719104	871	758641	894	799236	917	840889	940	883600	963	927369	986	972196
849	720801	872	760384	895	801025	918	842724	941	885481	964	929296	987	974169
850	722500	873	762129	896	802816	919	844561	942	887364	965	931225	988	976144
851	724201	874	763876	897	804609	920	846400	943	889249	966	933156	989	978121
852	725904	875	765625	898	806404	921	848241	944	891136	967	935089	990	980100
853	727609	876	767376	899	808201	922	850084	945	893025	968	937024	991	982081
854	729316	877	769129	900	810000	923	851929	946	894916	969	938961	992	984064
855	731025	878	770884	901	811801	924	853776	947	896809	970	940900	993	986049
856	732736	879	772641	902	813604	925	855625	948	898704	971	942841	994	988036
857	734449	880	774400	903	815409	926	857476	949	900601	972	944784	995	990025
858	736164	881	776161	904	817216	927	859329	950	902500	973	946729	996	992016
859	737881	882	777924	905	819025	928	861184	951	904401	974	948676	997	994009
860	739600	883	779689	906	820836	929	863041	952	906304	975	950625	998	996004
861	741321	884	781456	907	822649	930	864900	953	908209	976	952576	999	998001
862	743044	885	783225	908	824464	931	866761	954	910116	977	954529	1000	1000000
863	744769	886	784996	909	826281	932	868624	955	912025	978	956484		

ТАБЛИЦА XXV.

Квадратный корень всехъ чиселъ отъ 1. до 1000.

число	Квадрат. корень.	число	Квадрат. корень.	число	Квадрат. корень.	число	Квадрат. корень.	число	Квадрат. корень.	число	Квадрат. корень.	число	Квадрат. корень.
1	1,00000	26	5,09902	51	7,14143	76	8,71780	101	10,04988	126	11,22497	151	12,28821
2	1,41421	27	5,19615	52	7,21110	77	8,77496	102	10,09950	127	11,26943	152	12,32883
3	1,73205	28	5,29150	53	7,28011	78	8,83176	103	10,14889	128	11,31371	153	12,36932
4	2,00000	29	5,38516	54	7,34847	79	8,88819	104	10,19804	129	11,35782	154	12,40967
5	2,23607	30	5,47723	55	7,41620	80	8,94427	105	10,24695	130	11,40175	155	12,44990
6	2,44949	31	5,56776	56	7,48331	81	9,00000	106	10,29563	131	11,44552	156	12,49000
7	2,64575	32	5,65685	57	7,54983	82	9,05539	107	10,34408	132	11,48913	157	12,52996
8	2,82843	33	5,74456	58	7,61577	83	9,11043	108	10,39230	133	11,53256	158	12,56981
9	3,00000	34	5,83095	59	7,68115	84	9,16515	109	10,44031	134	11,57584	159	12,60952
10	3,16228	35	5,91608	60	7,74597	85	9,21954	110	10,48809	135	11,61895	160	12,64911
11	3,31662	36	6,00000	61	7,81025	86	9,27362	111	10,53565	136	11,66190	161	12,68858
12	3,46410	37	6,08276	62	7,87401	87	9,32738	112	10,58301	137	11,70470	162	12,72792
13	3,60555	38	6,16441	63	7,93725	88	9,38083	113	10,63015	138	11,74734	163	12,76715
14	3,74166	39	6,24500	64	8,00000	89	9,43398	114	10,67708	139	11,78983	164	12,80625
15	3,87298	40	6,32456	65	8,06206	90	9,48683	115	10,72381	140	11,83216	165	12,84523
16	4,00000	41	6,40312	66	8,12404	91	9,53939	116	10,77033	141	11,87434	166	12,88410
17	4,12311	42	6,48074	67	8,18535	92	9,59166	117	10,81665	142	11,91638	167	12,92285
18	4,24264	43	6,55744	68	8,24621	93	9,64365	118	10,86278	143	11,95826	168	12,96148
19	4,35890	44	6,63325	69	8,30662	94	9,69536	119	10,90871	144	12,00000	169	13,00000
20	4,47214	45	6,70820	70	8,36660	95	9,74679	120	10,95445	145	12,04159	170	13,03840
21	4,58258	46	6,78233	71	8,42615	96	9,79796	121	11,00000	146	12,08305	171	13,07670
22	4,69042	47	6,85565	72	8,48528	97	9,84886	122	11,04536	147	12,12436	172	13,11488
23	4,79583	48	6,92820	73	8,54400	98	9,89949	123	11,09054	148	12,16553	173	13,15295
24	4,89898	49	7,00000	74	8,60233	99	9,94987	124	11,13553	149	12,20656	174	13,19091
25	5,00000	50	7,07107	75	8,66025	100	10,00000	125	11,18034	150	12,24745	175	13,22876

Продолженіе:

Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.
сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.
176	13,26650	236	15,36229	296	17,20465	356	18,86796	416	20,39608	476	21,81742	536	23,15167
177	13,30413	237	15,39480	297	17,23369	357	18,89444	417	20,42058	477	21,84033	537	23,17326
178	13,34166	238	15,42725	298	17,26268	358	18,92089	418	20,44505	478	21,86321	538	23,19483
179	13,37909	239	15,45962	299	17,29162	359	18,94730	419	20,46949	479	21,88607	539	23,21637
180	13,41641	240	15,49193	300	17,32051	360	18,97367	420	20,49390	480	21,90890	540	23,23790
181	13,45362	241	15,52417	301	17,34935	361	19,00000	421	20,51828	481	21,93171	541	23,25941
182	13,49074	242	15,55635	302	17,37815	362	19,02630	422	20,54264	482	21,95450	542	23,28089
183	13,52775	243	15,58846	303	17,40690	363	19,05256	423	30,56696	483	21,97726	543	23,30236
184	13,56466	244	15,62050	304	17,43560	364	19,07878	424	20,59126	484	22,00000	544	23,32381
185	13,60147	245	15,65248	305	17,46425	365	19,10497	425	20,61553	485	22,02272	545	23,34524
186	13,63818	246	15,68439	306	17,49286	366	19,13113	426	20,63977	486	22,04541	546	23,36664
187	13,67479	247	15,71623	307	17,52142	367	19,15724	427	20,66398	487	22,06808	547	23,38803
188	13,71131	248	15,74802	308	17,54993	368	19,18333	428	20,68816	488	22,09072	548	23,40940
189	13,74773	249	15,77973	309	17,57840	369	19,20937	429	20,71232	489	22,11334	549	23,43075
190	13,78405	250	15,81139	310	17,60682	370	19,23538	430	20,73644	490	22,13594	550	23,45208
191	13,82027	251	15,84298	311	17,63519	371	19,26136	431	20,76054	491	22,15852	551	23,47339
192	13,85641	252	15,87451	312	17,66352	372	19,28730	432	20,78461	492	22,18107	552	23,49468
193	13,89244	253	15,90597	313	17,69181	373	19,31321	433	20,80865	493	22,20360	553	23,51595
194	13,92839	254	15,93738	314	17,72005	374	19,33908	434	20,83267	494	22,22611	554	23,53720
195	13,96424	255	15,96872	315	17,74824	375	19,36492	435	20,85665	495	22,24860	555	23,55844
196	14,00000	256	16,00000	316	17,77639	376	19,39072	436	20,88061	496	22,27106	556	23,57965
197	14,03567	257	16,03122	317	17,80449	377	19,41649	437	20,90455	497	22,29350	557	23,60085
198	14,07125	258	16,06238	318	17,83255	378	19,44222	438	20,92845	498	22,31591	558	23,62202
199	14,10674	259	16,09348	319	17,86057	379	19,46792	439	20,95233	499	22,33831	559	23,64318
200	14,14214	260	16,12452	320	17,88854	380	19,49353	440	20,97618	500	22,36068	560	23,66432
201	14,17745	261	16,15549	321	17,91647	381	19,51922	441	21,00000	501	22,38303	561	23,68544
202	14,21267	262	16,18641	322	17,94436	382	19,54482	442	21,02380	502	22,40536	562	23,70654
203	14,24781	263	16,21727	323	17,97220	383	19,57039	443	21,04757	503	22,42766	563	23,72762
204	14,28286	264	16,24808	324	18,00000	384	19,59592	444	21,07131	504	22,44994	564	23,74868
205	14,31782	265	16,27882	325	18,02776	385	19,62142	445	21,09502	505	22,47221	565	23,76973
206	14,35270	266	16,30951	326	18,05547	386	19,64688	446	21,11871	506	22,49444	566	23,79075
207	14,38749	267	16,34013	327	18,08314	387	19,67232	447	21,14237	507	22,51666	567	23,81176
208	14,42221	268	16,37071	328	18,11077	388	19,69772	448	21,16601	508	22,53886	568	23,83275
209	14,45683	269	16,40122	329	18,13836	389	19,72308	449	21,18962	509	22,56103	569	23,85372
210	14,49138	270	16,43168	330	18,16590	390	19,74842	450	21,21320	510	22,58318	570	23,87467
211	14,52584	271	16,46208	331	18,19341	391	19,77372	451	21,23676	511	22,60531	571	23,89561
212	14,56022	272	16,49242	332	18,22087	392	19,79899	452	21,26029	512	22,62742	572	23,91652
213	14,59452	273	16,52271	333	18,24829	393	19,82423	453	21,28380	513	22,64950	573	23,93742
214	14,62874	274	16,55295	334	18,27567	394	19,84943	454	21,30728	514	22,67157	574	23,95830
215	14,66288	275	16,58312	335	18,30301	395	19,87461	455	21,33073	515	22,69361	575	23,97916
216	14,69694	276	16,61325	336	18,33030	396	19,89975	456	21,35416	516	22,71563	576	24,00000
217	14,73092	277	16,64332	337	18,35756	397	19,92486	457	21,37756	517	22,73763	577	24,02082
218	14,76482	278	16,67333	338	18,38478	398	19,94994	458	21,40093	518	22,75961	578	24,04163
219	14,79865	279	16,70329	339	18,41195	399	19,97498	459	21,42429	519	22,78157	579	24,06242
220	14,83240	280	16,73320	340	18,43909	400	20,00000	460	21,44761	520	22,80351	580	24,08319
221	14,86607	281	16,76305	341	18,46619	401	20,02498	461	21,47091	521	22,82542	581	24,10394
222	14,89966	282	16,79286	342	18,49324	402	20,04994	462	21,49419	522	22,84732	582	24,12468
223	14,93318	283	16,82260	343	18,52026	403	20,07486	463	21,51743	523	22,86919	583	24,14539
224	14,96663	284	16,85230	344	18,54724	404	20,09975	464	21,54066	524	22,89105	584	24,16609
225	15,00000	285	16,88194	345	18,57418	405	20,12461	465	21,56386	525	22,91288	585	24,18677
226	15,03330	286	16,91153	346	18,60108	406	20,14944	466	21,58703	526	22,93469	586	24,20744
227	15,06652	287	16,94107	347	18,62794	407	20,17424	467	21,61018	527	22,95648	587	24,22808
228	15,09967	288	16,97056	348	18,65476	408	20,19901	468	21,63331	528	22,97825	588	24,24871
229	15,13275	289	17,00000	349	18,68154	409	20,22375	469	21,65641	529	23,00000	589	24,26932
230	15,16575	290	17,02939	350	18,70829	410	20,24846	470	21,67948	530	23,02173	590	24,28992
231	15,19868	291	17,05872	351	18,73493	411	20,27313	471	21,70253	531	23,04344	591	24,31049
232	15,23155	292	17,08801	352	18,76163	412	20,29778	472	21,72556	532	23,06513	592	24,33105
233	15,26434	293	17,11724	353	18,78829	413	20,32240	473	21,74856	533	23,08679	593	24,35159
234	15,29706	294	17,14643	354	18,81489	414	20,34699	474	21,77154	534	23,10844	594	24,37212
235	15,32971	295	17,17556	355	18,84144	415	20,37155	475	21,79449	535	23,13007	595	24,39262

Продолженіе.

Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.	Числ.	Квадрат.
сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.	сло.	корень.
596	24,41311	656	25,61250	716	26,75818	776	27,85678	836	28,91366	896	29,93326	956	30,91925
597	24,43358	657	25,63201	717	26,77686	777	27,87472	837	28,93095	897	29,94996	957	30,93542
598	24,45404	658	25,65151	718	26,79552	778	27,89265	838	28,94823	898	29,96665	958	30,95158
599	24,47448	659	25,67100	719	26,81418	779	27,91057	839	28,96550	899	29,98333	959	30,96773
600	24,49490	660	25,69047	720	26,83282	780	27,92848	840	28,98275	900	30,00000	960	30,98387
601	24,51530	661	25,70992	721	26,85144	781	27,94638	841	29,00000	901	30,01666	961	31,00000
602	24,53569	662	25,72936	722	26,87006	782	27,96426	842	29,01724	902	30,03331	962	31,01612
603	24,55606	663	25,74879	723	26,88866	783	27,98214	843	29,03446	903	30,04996	963	31,03224
604	24,57641	664	25,76820	724	26,90725	784	28,00000	844	29,05168	904	30,06659	964	31,04835
605	24,59675	665	25,78759	725	26,92582	785	28,01785	845	29,06888	905	30,08322	965	31,06445
606	24,61707	666	25,80698	726	26,94439	786	28,03569	846	29,08608	906	30,09983	966	31,08054
607	24,63737	667	25,82634	727	26,96294	787	28,05352	847	29,10326	907	30,11644	967	31,09662
608	24,65766	668	25,84570	728	26,98148	788	28,07134	848	29,12044	908	30,13304	968	31,11270
609	24,67793	669	25,86503	729	27,00000	789	28,08914	849	29,13760	909	30,14963	969	31,12876
610	24,69818	670	25,88436	730	27,01851	790	28,10694	850	29,15476	910	30,16621	970	31,14482
611	24,71841	671	25,90367	731	27,03701	791	28,12472	851	29,17190	911	30,18278	971	31,16087
612	24,73863	672	25,92296	732	27,05550	792	28,14249	852	29,18904	912	30,19934	972	31,17691
613	24,75884	673	25,94224	733	27,07397	793	28,16026	853	29,20616	913	30,21589	973	31,19295
614	24,77902	674	25,96151	734	27,09243	794	28,17801	854	29,22328	914	30,23243	974	31,20897
615	24,79919	675	25,98076	735	27,11088	795	28,19574	855	29,24038	915	30,24897	975	31,22499
616	24,81935	676	26,00000	736	27,12932	796	28,21347	856	29,25748	916	30,26549	976	31,24100
617	24,83948	677	26,01922	737	27,14774	797	28,23119	857	29,27456	917	30,28201	977	31,25700
618	24,85961	678	26,03843	738	27,16616	798	28,24889	858	29,29164	918	30,29851	978	31,27299
619	24,87971	679	26,05763	739	27,18455	799	28,26659	859	29,30870	919	30,31501	979	31,28898
620	24,89980	680	26,07681	740	27,20294	800	28,28427	860	29,32576	920	30,33150	980	31,30495
621	24,91987	681	26,09598	741	27,22132	801	28,30194	861	29,34280	921	30,34798	981	31,32092
622	24,93993	682	26,11513	742	27,23968	802	28,31960	862	29,35984	922	30,36445	982	31,33688
623	24,95997	683	26,13427	743	27,25803	803	28,33725	863	29,37686	923	30,38092	983	31,35283
624	24,97999	684	26,15339	744	27,27636	804	28,35489	864	29,39388	924	30,39737	984	31,36877
625	25,00000	685	26,17250	745	27,29469	805	28,37252	865	29,41088	925	30,41381	985	31,38471
626	25,01999	686	26,19160	746	27,31300	806	28,39014	866	29,42788	926	30,43025	986	31,40064
627	25,03997	687	26,21068	747	27,33130	807	28,40775	867	29,44486	927	30,44667	987	31,41656
628	25,05993	688	26,22975	748	27,34959	808	28,42534	868	29,46184	928	30,46309	988	31,43247
629	25,07987	689	26,24881	749	27,36786	809	28,44293	869	29,47881	929	30,47950	989	31,44837
630	25,09980	690	26,26785	750	27,38613	810	28,46050	870	29,49576	930	30,49590	990	31,46427
631	25,11971	691	26,28688	751	27,40438	811	28,47806	871	29,51271	931	30,51229	991	31,48015
632	25,13961	692	26,30589	752	27,42262	812	28,49561	872	29,52965	932	30,52868	992	31,49603
633	25,15949	693	26,32489	753	27,44085	813	28,51315	873	29,54657	933	30,54505	993	31,51190
634	25,17936	694	26,34388	754	27,45906	814	28,53068	874	29,56349	934	30,56141	994	31,52777
635	25,19921	695	26,36285	755	27,47726	815	28,54820	875	29,58040	935	30,57777	995	31,54362
636	25,21904	696	26,38181	756	27,49545	816	28,56571	876	29,59730	936	30,59412	996	31,55947
637	25,23886	697	26,40076	757	27,51363	817	28,58321	877	29,61419	937	30,61046	997	31,57531
638	25,25866	698	26,41969	758	27,53180	818	28,60070	878	29,63106	938	30,62679	998	31,59114
639	25,27845	699	26,43861	759	27,54995	819	28,61818	879	29,64793	939	30,64311	999	31,60696
640	25,29822	700	26,45751	760	27,56810	820	28,63564	880	29,66479	940	30,65942	1000	31,62278
641	25,31798	701	26,47640	761	27,58623	821	28,65310	881	29,68164	941	30,67572		
642	25,33772	702	26,49528	762	27,60435	822	28,67054	882	29,69848	942	30,69202		
643	25,35745	703	26,51415	763	27,62245	823	28,68798	883	29,71532	943	30,70831		
644	25,37716	704	26,53300	764	27,64055	824	28,70540	884	29,73214	944	30,72458		
645	25,39685	705	26,55184	765	27,65863	825	28,72281	885	29,74895	945	30,74085		
646	25,41653	706	26,57066	766	27,67671	826	28,74022	886	29,76575	946	30,75711		
647	25,43619	707	26,58947	767	27,69476	827	28,75761	887	29,78255	947	30,77337		
648	25,45584	708	26,60827	768	27,71281	828	28,77499	888	29,79933	948	30,78961		
649	25,47548	709	26,62705	769	27,73085	829	28,79236	889	29,81610	949	30,80584		
650	25,49510	710	26,64583	770	27,74887	830	28,80972	890	29,83287	950	30,82207		
651	25,51470	711	26,66458	771	27,76689	831	28,82707	891	29,84962	951	30,83829		
652	25,53429	712	26,68333	772	27,78489	832	28,84441	892	29,86637	952	30,85450		
653	25,55386	713	26,70206	773	27,80288	833	28,86174	893	29,88311	953	30,87070		
654	25,57342	714	26,72078	774	27,82086	834	28,87906	894	29,89983	954	30,88689		
655	25,59297	715	26,73948	775	27,83882	835	28,89637	895	29,91655	955	30,90307		

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[The bottom section of the page contains additional text, possibly a conclusion or a separate entry, which is also illegible due to fading.]

П Р И Б А В Л Е Н И Е.

СОДЕРЖАЩЕЕ ВЪ СЕБѢ ГЛАВНЫЯ ТРИГОНОМЕТРИЧЕСКІЯ УРАВНЕНІЯ.

I. Общее Уравненіе.

$$\text{N}^{\circ} 1. \sin x^2 + \cos x^2 = 1.$$

$$2. \operatorname{Tang} x = \frac{\sin x}{\cos x}.$$

$$3. \operatorname{Cotang} x = \frac{\cos x}{\sin x}.$$

$$4. \operatorname{Tang} x \operatorname{Cotang} x = 1.$$

$$5. \sec x = \frac{1}{\cos x} = \pm \sqrt{1 + \operatorname{Tang} x^2}$$

$$6. \operatorname{Cosec} x = \frac{1}{\sin x} = \pm \sqrt{1 + \operatorname{Cotang} x^2}$$

$$7. \sin \operatorname{ver} x = 1 - \cos x.$$

$$8. \sin (x+y) = \sin x \cos y + \cos x \sin y.$$

$$9. \cos (x+y) = \cos x \cos y - \sin x \sin y.$$

$$10. \sin (x-y) = \sin x \cos y - \cos x \sin y.$$

$$11. \cos (x-y) = \cos x \cos y + \sin x \sin y.$$

$$12. \operatorname{Tang} (x+y) = \frac{\operatorname{Tang} x + \operatorname{Tang} y}{1 - \operatorname{Tang} x \operatorname{Tang} y}$$

$$13. \operatorname{Tang} (x-y) = \frac{\operatorname{Tang} x - \operatorname{Tang} y}{1 + \operatorname{Tang} x \operatorname{Tang} y}$$

$$14. \operatorname{Cotang} (x+y) = \frac{\operatorname{Cotang} x \operatorname{Cotang} y - 1}{\operatorname{Cotang} x + \operatorname{Cotang} y}.$$

$$15. \operatorname{Cotang} (x-y) = \frac{\operatorname{Cotang} x \operatorname{Cotang} y + 1}{\operatorname{Cotang} y - \operatorname{Cotang} x}.$$

$$16. \sin x \sin y = \frac{1}{2} (\cos (x-y) - \cos (x+y))$$

$$17. \cos x \cos y = \frac{1}{2} ((\cos (x-y) + \cos (x+y)))$$

$$18. \sin x = 2 \sin \frac{1}{2} x \cos \frac{1}{2} x$$

$$19. \cos x = \cos \frac{1}{2} x^2 - \sin \frac{1}{2} x^2$$

$$20. \sin x \cos x = \frac{1}{2} \sin 2x.$$

$$21. \operatorname{Tang} x = \frac{2 \operatorname{Tang} \frac{1}{2} x}{1 - \operatorname{Tang}^2 \frac{1}{2} x}$$

$$\text{N}^{\circ} 27. \sin x + \sin y = 2 \sin \frac{1}{2} (x+y) \cos \frac{1}{2} (x-y)$$

$$28. \sin x - \sin y = 2 \cos \frac{1}{2} (x+y) \sin \frac{1}{2} (x-y)$$

$$29. \cos x + \cos y = 2 \cos \frac{1}{2} (x+y) \cos \frac{1}{2} (x-y)$$

$$30. \cos x - \cos y = -2 \sin (x+y) \sin \frac{1}{2} (x-y)$$

$$31. \frac{\sin x + \sin y}{\cos x + \cos y} = \operatorname{Tang} \frac{1}{2} (x+y).$$

$$32. \frac{\sin x - \sin y}{\cos x + \cos y} = \operatorname{Tang} \frac{1}{2} (x-y).$$

$$33. \frac{\sin x + \cos y}{\cos x - \cos y} = -\operatorname{Cotang} \frac{1}{2} (x-y).$$

$$34. \frac{\sin x - \sin y}{\cos x - \cos y} = -\operatorname{Cotang} \frac{1}{2} (x+y).$$

$$35. \frac{\sin x + \sin y}{\sin x - \sin y} = \operatorname{Tang} \frac{1}{2} (x+y) \operatorname{Cotang} \frac{1}{2} (x-y).$$

$$36. \frac{\cos x + \cos y}{\cos x - \cos y} = -\operatorname{Cotang} \frac{1}{2} (x+y) \operatorname{Cotang} \frac{1}{2} (x-y).$$

$$37. \operatorname{Tang} x + \operatorname{Tang} y = \frac{\sin (x+y)}{\cos x \cos y}.$$

$$38. \operatorname{Tang} x - \operatorname{Tang} y = \frac{\sin (x-y)}{\cos x \cos y}.$$

$$39. \operatorname{Cotang} x + \operatorname{Cotang} y = \frac{\sin (x+y)}{\sin x \sin y}.$$

$$40. \operatorname{Cotang} x - \operatorname{Cotang} y = -\frac{\sin (x-y)}{\sin x \sin y}.$$

$$41. \operatorname{Cotang} x + \operatorname{Tang} y = \frac{\cos (x-y)}{\sin x \cos y}.$$

$$42. \operatorname{Cotang} x - \operatorname{Tang} y = -\frac{\cos (x+y)}{\sin x \cos y}.$$

$$43. 1 + \operatorname{Tang} x \cdot \operatorname{Tang} y = \frac{\cos (x-y)}{\cos x \cdot \cos y}.$$

$$44. 1 - \operatorname{Tang} x \cdot \operatorname{Tang} y = \frac{\cos (x+y)}{\cos x \cdot \cos y}.$$

$$45. \operatorname{Cotang} x \cdot \operatorname{Cotang} y + 1 = \frac{\cos (x-y)}{\sin x \cdot \sin y}.$$

$$22. \cotang x = \frac{\cotang \frac{1}{2} x^2 - 1}{2 \cotang \frac{1}{2} x}$$

$$23. 2 \sin \frac{1}{2} x^2 = 1 - \cos x$$

$$24. 2 \cos \frac{1}{2} x^2 = 1 + \cos x$$

$$25. \tan \frac{1}{2} x^2 = \frac{1 - \cos x}{1 + \cos x}$$

$$26. \cotang \frac{1}{2} x^2 = \frac{1 + \cos x}{1 - \cos x}$$

$$46. \cotang x \cotang y - 1 = \frac{\cos (x + y)}{\sin x \sin y}$$

$$47. \sin (x + y) \sin (x - y) = \sin x^2 - \sin y^2 \\ = \frac{1}{2} \cos 2 y - \frac{1}{2} \cos 2 x$$

$$48. \cos (x + y) \cos (x - y) = \cos x^2 - \sin y^2 \\ = \frac{1}{2} \cos 2 y + \frac{1}{2} \cos 2 x$$

$$49. \sin (x + y) \cdot \cos (x - y) = \frac{1}{2} \sin 2 x + \frac{1}{2} \sin 2 y.$$

$$50. \sin (x - y) \cdot \cos (x + y) = \frac{1}{2} \sin 2 x - \frac{1}{2} \sin 2 y.$$

II. УРАВНЕНИЕ ДЛЯ ТРЕУГОЛЬНИКОВЪ.

Назвавъ a, b, c стороны A, B, C противъ лежащія углы, S обмѣръ Треугольника, P Площадь и поверхности и r Радиусъ шара.

1. Уравненіе для плоскихъ Треугольниковъ.

$$\text{N}^{\circ} 51. \frac{a}{\sin A} = \frac{b}{\sin B} = \frac{c}{\sin C}$$

$$52. \operatorname{Tang} A = \frac{a \sin C}{b - a \cos C}$$

$$53. \operatorname{Tang} \frac{1}{2}(A-B) = \frac{a-b}{a+b} \operatorname{Cotang} \frac{1}{2} C$$

$$54. c^2 = a^2 + b^2 - 2ab \cos C.$$

$$55. \cos C = \frac{a^2 + b^2 - c^2}{2ab}$$

$$56. P = \frac{1}{2} ab \sin C = \sqrt{\frac{1}{2} S (\frac{1}{2} S - a) (\frac{1}{2} S - b) (\frac{1}{2} S - c)}$$

2. Уравненіе для прямоугольныхъ Сферическихъ Треугольниковъ.

$$\text{N}^{\circ} 57. \cos a = \cos b \cos c$$

$$58. \sin B = \frac{\sin b}{\sin a}$$

$$59. \cos B = \frac{\operatorname{Tang} c}{\operatorname{Tang} a}$$

$$60. \cos B = \sin C \cos b.$$

$$61. \operatorname{Tang} B = \frac{\operatorname{Tang} b}{\sin c}$$

$$62. \operatorname{Tang} B = \frac{\operatorname{Cotang} C}{\cos a}$$

3. Уравненіе для косвенноугольныхъ Сферическихъ Треугольниковъ.

$$\text{N}^{\circ} 63. \frac{\sin A}{\sin a} = \frac{\sin B}{\sin b} = \frac{\sin C}{\sin c}$$

$$64. \cos a = \cos b \cos c + \sin b \sin c \cos A.$$

$$65. \cos A = -\cos B \cos C + \sin B \sin C \cos a.$$

$$66. \operatorname{Cotang} a \sin c = \sin B \operatorname{Cotang} A + \cos c \cos B.$$

$$67. \operatorname{Cotang} A \sin C = \sin b \operatorname{Cotang} a - \cos C \cos b.$$

$$67. \cos \frac{1}{2} A \sin \frac{1}{2} (b-c) = \sin \frac{1}{2} a \sin \frac{1}{2} (B-C)$$

$$68. \cos \frac{1}{2} A \cos \frac{1}{2} (b-c) = \cos \frac{1}{2} a \sin \frac{1}{2} (B+C)$$

$$69. \sin \frac{1}{2} A \sin \frac{1}{2} (b+c) = \sin \frac{1}{2} a \cos \frac{1}{2} (B-C)$$

$$70. \sin \frac{1}{2} A \cos \frac{1}{2} (b+c) = \cos \frac{1}{2} a \cos \frac{1}{2} (B+C)$$

$$71. \text{Tang } \frac{1}{2} (b-c) = \frac{\text{Sin } \frac{1}{2} (B-C)}{\text{Sin } \frac{1}{2} (B+C)} \text{Tang } \frac{1}{2} a$$

$$72. \text{Tang } \frac{1}{2} (b+c) = \frac{\text{Cos } \frac{1}{2} (B-C)}{\text{Cos } \frac{1}{2} (B+C)} \text{Tang } \frac{1}{2} a$$

$$73. \text{Tang } \frac{1}{2} (B-C) = \frac{\text{Sin } \frac{1}{2} (b-c)}{\text{Sin } \frac{1}{2} (b+c)} \text{Cotang } \frac{1}{2} A$$

$$74. \text{Tang } \frac{1}{2} (B+C) = \frac{\text{Cos } \frac{1}{2} (b-c)}{\text{Cos } \frac{1}{2} (b+c)} \text{Cotang } \frac{1}{2} A$$

$$75. P = (A + B + C - 180^\circ). r^2.$$



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